

THE BOSTON Medical and Surgical JOURNAL

VOLUME 197

DECEMBER 8, 1927

NUMBER 23

ORIGINAL ARTICLES

USE OF IODINE IN THYROID DISEASE*

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"The giving of iodine in thyroid disease has no other effect than its specific action on the thyroid gland and the thyroid secretion."

THE thyroid gland is capable, within normal and abnormal limitations, of remarkable changes both in its morphology and physiology. Obviously, the changes in the thyroid may be those of a pure anatomical nature or of a pure chemical nature or what is more frequently encountered, a combination of both. There is a type of thyroid disease characterized by an increase of secretion and with clinical reactions that vary from slight to extreme degrees of hyperthyroidism—so-called toxic adenoma. Again, there is a type of thyroid disease characterized by a change in the character of the secretion and representing essentially a dysfunction with hyperthyroidism—so-called Graves' disease or exophthalmic goiter. Again, there is a type of thyroid disease characterized by a decrease of secretion and with clinical reactions that vary from mild to severe degrees of hypothyroidism—so-called colloid goiter or myxedema.

The discovery and isolation of thyroxin by Kendall was a most important step in the elucidation of the affections of the thyroid. The subsequent recommendation of iodine by Plummer as a preliminary measure in the pre-operative treatment of Graves' disease resulted in the elimination, to a large extent, of the death hazard in this type of goiter. Unfortunately, however, the profession and public, eager to accept new therapeutic measures, seized upon the iodine therapy idea and there began an era of wholesale administration of iodine for all types of goitrous conditions with distinct harm in most cases. Iodine has its place in thyroid disease but it must be used only after a definite clinical and pathological diagnosis has been established and always with precision and caution.

The fact that thyroid tissue may vary histologically in diametrically opposite ways within the same gland and that we may observe all types of degeneration, all types of hyperplasia and all types of colloid change in one and the

same section of the gland indicates, in a measure, the difficulties to be encountered in making a rigid pathological classification. On the other hand, no such difficulties confront the practitioner in arriving at a clinical classification of goiter. In the Goiter Clinic at the New York Post-Graduate Medical School and Hospital we have employed a clinical classification of goiter that while capable of variation has the merit of simplicity.

FUNCTIONAL DISTURBANCES OF THYROID SECRETION

1. Hyposecretion

A. Simple Goiter—Endemic Goiter—Colloid Goiter

1. Adolescence
2. Pregnancy
3. Lactation
4. Menopause

B. Myxedematous Conditions

1. Foetal—Cretinism
2. Gull's Disease—Myxedema
3. Cachexia Strumipriva

2. Hypersecretion

A. Graves' Disease—Dysfunction—of Abnormal Thyroid Hormone

B. Adenomata—Hypersecretion—of Normal Thyroid Hormone

Every cell in the body, to perform its function properly, needs thyroxin. Deficiency of thyroid secretion may be due to: (1) the congenital absence of the thyroid gland or to a lack of function; (2) the removal of too much tissue during a thyroidectomy; (3) the destruction of thyroid tissue by radio-active agents as in the treatment of glandular conditions of the neck; (4) an acquired hyposecretory activity of the thyroid itself and finally, (5) to a dysfunction associated with an iodine deficiency. Thyroxin is made up of 65 per cent. iodine and the thyroid gland must obtain approximately 22/100 of a mllg. of iodine per day. It is probable that most of the patients that develop thyroid enlargement have some natural basic factor at work for the vast majority of persons showing functional disease of the thyroid in later life have had a preceding goiter. A normal thyroid activity presupposes an adequate intake of iodine, with unimpaired digestion and intestinal

*Clinical Congress, Connecticut State Medical Society, New Haven, Conn., September 22, 1927.

absorption together with proper utilization by the thyroid. Any or all of these factors may be at fault. The experiments of Hart and Stenbach demonstrated the necessity of normal intestinal activity for the proper absorption of iodine. A pregnant woman may secrete enough thyroxin for her own metabolic demands but be unable to make a sufficient amount for the combined metabolism of herself and child.

All thyroid activity is dependent upon the the amount of iodine that is present within the gland, in the blood stream and in the body tissues. With the normal gland exercising physiological function it has been determined that there are two forms of iodine compounds present in the thyroid. There is an inactive iodine compound within the cells of the acini and which is in the process of elaboration into the active iodine compound—thyroxin. The excess of thyroxin above the physiological requirements of the body is stored within the colloid material. It is obvious, therefore, that there is a physiological minimal and maximal thyroxin production. Since it is the specific purpose of the individual acinar cells to manufacture thyroxin it follows that as long as there is sufficient thyroxin made to meet the demands of body activity there will be no necessity for any additional cell development. If the cells, however, fail to elaborate thyroxin in sufficient amounts the colloid begins to lose its thyroxin and to contain less and less iodine. If more thyroxin is elaborated than is necessary the excess passes into the blood stream and the ability of the colloid material to store iodine is partially or completely lost. The amount of colloid material present within the acini is directly proportional to the cellular hyperplasia. The greater the number of acinar cells the less the amount of colloid present.

Iodine deficiency may obviously exist as an absolute deficiency when the intake of iodine compounds is below the normal needs of the body. This is the evident explanation of goiter districts, of cretinism, and in later life of some of the types of myxedema. Iodine compounds are, however, widely distributed in nature and the amount of iodine required to keep the thyroid gland in functional balance is extremely little as the iodine store can be rapidly and markedly increased by exceedingly small quantities of iodine given in any form and given by any way of administration. Iodine deficiency may exist as a relative deficiency when there is an increased physiological need and the iodine intake which is adequate under ordinary circumstances is insufficient for the time being as is evidenced in the goiter of adolescence, pregnancy and infections.

The problem of so-called adolescent goiter is essentially different from any other aspect of goiter. The wide and increasingly extensive areas of goiter regions, the survey of school chil-

dren, the army draft, statistically reveal the high numerical percentage of our population subjected to goiter. Conditions embracing: (1) bad heredity, (2) over-crowding, (3) over-feeding, (4) artificial feeding, (5) social, scholastic and athletic demands, (6) focal infection, (7) lack of iodine absorption by reason of intestinal disease, (8) lack of iodine in dietary or water, all play their part in the life of the individual, either in utero, during infancy, puberty, adolescence or adult life. Particularly obvious are the conditions of over-excitement, over-activity with exhaustion as it pertains to our school children. In this type of thyroid disease, characterized by a slight fullness of the neck we have a work phenomenon hyperplasia as a result of a fatigue status and the acinar cells of the thyroid proliferate. This cellular reaction is essentially due to an iodine deficiency—the iodine content of the gland, according to Marine, has fallen below 0.1% and when this minimal standard is passed proliferation inevitably ensues, resulting in an increase in the size of the gland. Here iodine comes preëminently into its own as a prophylactic and preventive measure and secondarily, and almost of equal importance though less satisfactorily, is the use of iodine for therapeutic purposes in this type of goiter.

During the active biotic periods of life, such as the foetal period, adolescence, pregnancy, lactation and during recessive cell changes, as in the menopause, the necessity for a constant quantity of thyroid hormone in the body tissues is apparent. Hence, the desirability of aiding these periods by the prophylactic administration of iodine. The treatment of already existing chronic goiters by iodine is not uniformly so successful nor as certain as a prophylactic treatment in the young against their formation. Small adenomata are almost always found in colloid goiter after the age of twenty-five and hence the desirability of limiting the use of iodine in well developed colloid goiters to puberty and adolescence.

In chronic or long standing cases of simple or colloid goiter the functional deficiency has ordinarily been corrected automatically or the individual has outgrown the condition, and the patient exhibits clinically only a deformity of the neck, as an evidence of a previous thyroid disease. The patient presents herself for treatment for the enlargement of her neck and not for any functional condition of secretion. All that iodine therapeutically given can hope to accomplish is to tone up, and possibly regulate thyroid secretion. In more recently acquired thyroid enlargements of the colloid type and occasionally in long standing cases much may be accomplished in the diminution of the size of the thyroid by iodine therapy. Obviously, however, goiters with the secondary changes—cyst formation, hemorrhage, calcification, adenoma and later malignancy,—are in no way re-

lieved or changed by iodine. Large amounts of iodine in addition to being dangerous cause acute secretory disturbances in the thyroid with distention of the alveoli and enlargement of the whole gland. The thyroid becomes hard, painful, suggesting multiple small adenomata. I have seen the thyroid gland permanently enlarged, extremely hard, and painful, with the skin and subcutaneous tissues apparently fixed or adherent to the thyroid as the result of over-iodine medication. At operation the gland tissue is friable, hard, bleeding excessive, vessels hard to clamp and mobilization of the gland difficult.

Simple goiter occurs in children without adenomata but with increasing length of time adenoma develop so while iodine may be given to simple colloid goiter in children and through adolescence to prevent or to act curatively its use in adult life aside from pregnancy and lactation should be proceeded with by caution.

There is considerable evidence (largely adduced by Plummer) that there are at least two distinct types of hyperthyroidism: (1) a hyperthyroidism due to a dysfunction as in Graves' disease and (2) a hyperthyroidism due to a true hypersecretion as in toxic adenoma of the thyroid. The clinical history of Graves' disease represents an intoxication from functional disturbance of the thyroid characterized by a sudden, acute onset, with a rapid summation of symptoms so that the clinical picture is complete within a relatively short period of time, usually less than a year. Exophthalmos is present in 50 per cent. of the cases within the first year and in at least 80 per cent. of the cases within two years. Graves' disease is dramatic in its course by reason of its crisis, wave after wave of increasing toxemia occur, with each crest producing a more severe degree of intoxication. The waves of increasing toxicity are followed by periods of remission which are variable in extent but each succeeding wave of toxemia is characterized by increasing damage to the heart, blood vessels, kidney and hepatic parenchyma. There is the rapid loss of stored glycogen in the liver which accounts for the high hyperglycemic index in the blood and the storage capacity of the liver cells for glycogen is correspondingly exhausted. The gastric crisis of nausea and vomiting; the extreme degree of cerebral irritability manifested by increasing physical restlessness, exaggerated and purposeless movements; the marked vascularity of the thyroid itself with pronounced thrill and bruit, are all evidences of the acute character of the thyroid toxemia.

It is interesting, however, to note that the amount of active iodine compound present in the hyperplastic thyroid with a clinical picture of Graves' disease hyperthyroidism is anywhere from one-twentieth to one-fifteenth of the amount which is present in the normal thyroid.

This interesting observation of Plummer merely demonstrates not a lessened elaboration of thyroid secretion by the gland but an increased flooding of the blood stream with product of thyroid over-activity. An elevated basal metabolic rate is generally indicative of either an increase in the absolute quantity of thyroxin within the cells of the body or an increase in its concentration. It has been advanced, and there is considerable evidence to support it, that the thyroid in Graves' disease elaborates a thyroxin molecule which possesses some abnormal chemical structure. At the present time we have no direct evidence but data seems to be accumulating to indicate that the mechanism, whether chemical or nervous, which regulates the flow of thyroid secretion in the hyperthyroidism of Graves' disease is also disturbed as well as the changes that occur in the gland. In the hyperthyroidism of Graves' disease the thyroid gland contains relatively and occasionally absolutely less iodine than the normal gland; the acute onset (usually less than a year) from the beginning of symptoms until the disease is a fully developed clinical entity; the selective action of its toxin presupposes on the one hand some derangement of the control mechanism regulating the amount of thyroxin in the blood and tissues as well as an aberrant type of thyroxin molecule due to a deformity in its chemical configuration. In the toxemia of Graves' disease the thyroxin molecule probably represents a dysfunction or a changed, impure or abortive type of uniodized type of secretion. The administration of iodine changes the inherent toxicity of this thyroxin molecule and for a time, at least, renders it much less noxious and lethal. Speculatively we may assume that the giving of iodine changes the physical or chemical configuration of the molecule of preformed thyroxin and brings it more nearly into accord with the type of thyroxin we have in the hyperthyroidism of adenoma.

Toxic adenoma of the thyroid, on the other hand, is essentially a chronic and progressive intoxication and the typical clinical picture of hyperthyroidism of adenoma can also be obtained by the intravenous injection of thyroxin or the feeding of dessicated thyroid. The toxicity of this hypersecretion in hyperthyroidism of adenoma is not as selective as in Graves' disease, the clinical course is not characterized by waves and crises. Its action is less rapid, less dramatic and runs its course over many years. Cardiac disability is probably the main symptom which induces the patient to seek relief. Exophthalmos is not present in 80 per cent. of the cases and when present probably is the result of the simultaneous interaction of a Graves' disease thyroid with adenomata. The hyperthyroidism due to adenomata is a true hypersecretion with an excess of the thyroid hormone in the gland, blood and tissues. Since it is

predicated in this type of hyperthyroidism that the thyroxin molecule is complete and not defective in chemical configuration iodine therapy cannot be of benefit. The hyperthyroidism of adenoma does not come on suddenly or dramatically, but is essentially chronic in its onset and development in contrast with the onset and development of hyperthyroidism in Graves' disease which is sudden, acute, dramatic and selective. The patient with toxic adenomata will have had a visible or palpable, unilateral or diffuse tumor of the thyroid for ten or twelve years before signs and symptoms of hyperthyroidism manifest themselves. The non-toxic, adenomatous goiter may be changed from a non-toxic adenoma into an adenoma with hyperthyroidism by the giving of iodine either through mistaken diagnosis that the goiter is a colloid type, or through unwise administration of iodine.

In toxic adenomata both the amount of iodine in the gland and in the blood stream and tissues is higher than that which is found in normal gland tissue, owing to the fact that there is a distinct and essential hypersecretion. In the non-toxic adenomata, however, neither the iodine in the gland or in the blood stream is higher than that found in normal thyroids, pointing to the fact that when toxic manifestations are not present in the adenomatous thyroid the iodine content in the thyroid gland and the body generally is within the normal range.

Marine, however, believes that the primary defect in Graves' disease lies in the visceral nervous system and that while the thyroid plays an important part it is, however, only a secondary role. Evidence points to a loss of balance in the regulating apparatus or mechanism of thyroid secretion control. (1) The marked cellular hyperplasia in the gland; (2) the loss of colloid; (3) the iodine compound in Graves' disease is only one-fifteenth to one-twentieth of what exists in the normal gland; (4) the excess of thyroxin flows into the tissues and is not retained in the gland; (5) the selective action apparently exerted by this thyroid secretion as manifested in the special kind of symptoms which are present in Graves' disease, namely, the marked cerebral excitation, exophthalmos, the quadriceps weakness, etc. It is apparent that the patients with Graves' disease are acutely hypersensitive to all stimuli, physical, emotional, nervous and chemical, and are particularly sensitive to iodine and adrenalin. Any good results that may be obtained in Graves' disease by the use of iodine are limited and of short duration. Prolonged use of iodine in Graves' disease produces harmful results which are extensive, serious and permanent. In the giving of iodine in Graves' disease we have a striking example of a remedial measure accepted avidly by the profession and public alike and its universal application within a few months after

its publication, to be followed, however, by laborious propaganda of years to indicate and demark the extremely limited field of usefulness and the precise and definite indications for its application.

Iodine when given in Graves' disease as a pre-operative measure makes the operation safer if performed within two weeks. The giving of iodine diminishes the possibility of exhaustion crises so characteristic of severe Graves' disease. It raises the resistance of the patient, not however, primarily by lowering the metabolic rate but gives a temporary chemical change in the character of the thyroid secretion. While it is true that there exists a certain degree of parallelism between the basal metabolic rate and the operative mortality this is by no means a constant character as many cases with a high basal metabolic rate offer better surgical risk than other cases with a lower basal metabolic rate but an extremely poor clinical condition as evidenced by the chronic degenerative changes in the brain, liver, heart and kidney. Plummer and Boothby both draw attention to the temporary character of the benefits to be derived from iodine in Graves' disease. Under iodine the acinar cells are brought into a resting phase for a short time only and iodine should be used in Graves' disease only as a pre-operative and post-operative measure. As pre-operative therapy it should not be given longer than ten days to two weeks before operation. The continued use of iodine in the hyperthyroidism of Graves' disease means a loss of its tonic or beneficial effect and always a rejuvenescence of the symptoms after a few weeks in a more pronounced form and from which no further good effect is to be expected by again giving iodine should the patient desire surgery at a later time. When iodine is given for a short time as a pre-operative measure in Graves' disease the tremor lessens, the tachycardia decreases, the insomnia lessens and disappears, the restlessness and the purposeless movements also disappear, the basal metabolic rate drops, the gastric crises cease and feeding can again be instituted and comparative physical well being established. Elimination has been improved and a tonic effect with increased resistance has been acquired. However, the degenerative changes that go with long continued hyperthyroidism are not changed by iodine. The damaged myocardium, hepatic cells, renal parenchyma and cerebral cells are not changed by iodine administration. These changes respond only to prolonged rest after the disturbing thyroid has been removed by surgery.

If a patient with Graves' disease has been taking iodine and the iodine is stopped there is a rapid rise in basal metabolism and an increase in toxic symptoms. If iodine is used pre-operatively there should be no free interval between the giving of iodine and operation.

Iodine when given in small quantities at intervals, fifteen mllg. daily for two weeks, twice a year, is an effective preventive measure against simple goiter. Its use can and should be extended in the early cases of thyroid enlargement in children and it should be given to the pregnant woman and during lactation, particularly if in a region of high goiter incidence. At puberty and later adolescence the presence of a thyroid enlargement should be carefully diagnosticated to be sure that the enlargement is not due to adenomata. If adenomata are present and the cause of thyroid enlargement iodine therapy is in our opinion not indicated. It may, however, be given as a therapeutic test but must be carefully watched to detect activation of the adenomata with the development of hyperthyroidism. Many cases of colloid or simple goiter have a natural or spontaneous cure of thyroid insufficiency by growing out of it or as the result of a change in environment, diet or place of residence. These cases have a permanently enlarged thyroid and iodine will ordinarily not cause the enlargement to disappear although in approximately one-third there will be some diminution in size. Adenomata in adults with or without hypersecretion are not proper patients for iodine therapy. The giving of iodine to a patient with adenomata frequently initiates in a quiescent case all the symptoms of hyperthyroidism. The effect is wholly bad and brings about, if long continued, a fixed hyperthyroidism for the hypersecretion induced by iodine does not subside with the discontinuance of the agent. The gland itself may become smaller, always becomes harder and seemingly more fixed to the surrounding tissue. Operation is then the only thing to be considered and since little can be done for this type by pre-operative measures the surgical mortality is correspondingly greater than in cases of hyperthyroidism of Graves' disease or the hyperthyroidism of adenoma which has not been receiving iodine.

Adult patients frequently have both a colloid and adenomatous goiter. Here iodine should be

given with caution. The desire is, of course, to influence the colloid material and not to activate the adenomata. Occasionally the result is that there is no effect on the colloid while there is a sudden, active induction of hyperthyroidism.

In the post-operative management of all types of thyroid cases iodine has come to occupy a large place. Our own experience seems to suggest that after any goiter operation iodine is indicated. The administration of iodine may be by mouth, rectum, hypodermatically or intravenously, and any preparation of iodine is useful although our preference is for sodium iodid in goiter prophylaxis and Lugol's solution in pre-operative and post-operative iodine therapy.

CONCLUSIONS

1. Iodine is a drug and its use in goiter therapy should be entirely within the hands of the physician.
2. Iodine is pre-eminently useful in goiter prophylaxis; it is immaterial how it is administered or in what form, providing the dose is small and the treatment intermittent.
3. It is useful in stabilizing function in the colloid type of goiter, but care should be exercised to eliminate adenoma in the diagnosis. Adenomata are infrequent before twenty years of age.
4. It is distinctly indicated as a preventive measure, either in or out of regions of high goiter incidence during pregnancy and lactation, and the menopause.
5. It is distinctly indicated for a short period of time but without a gap as a pre-operative measure in Graves' disease.
6. It is indicated as a post-operative measure after all types of goiter operations.
7. Its use in adenomata is variable but pre-eminently dangerous as initiating hyperthyroidism in non-toxic adenomatous goiters.
8. When used outside of restricted indications above noted its use has an inherent danger of producing an iodine hyperthyroidism which is fixed, progressive and dangerous.

COLLOID CARCINOMA OF THE BLADDER

BY EDWARD L. YOUNG, JR., M.D.

THE following reports of two cases of colloid carcinoma primary in the bladder are here presented because of the extreme rarity of the condition and because of the available data, complete in one case and from the long duration presumably accurate in the other. A short résumé of the literature is added to bring the subject up to date.

The first case was that of a man of forty-eight first seen in the fall of 1919. He had had hematuria at two urinations only about a week before he reported for examination. The general examination and previous history were entirely negative. He was

an unusually healthy, vigorous man. He was somewhat nervous about trivial things and that is presumably the reason he noticed the slight hematuria and reported for an explanation of it. Cystoscopy showed a very small tumor of the fundus of the bladder. The appearance was that of a benign papilloma and because of that and its small size it was treated with fulguration through the cystoscope. In two treatments the tumor was entirely gone and the mucous membrane, so far as could be told on subsequent examinations through the cystoscope, was smooth and normal. He was free of symptoms until the spring of 1921. At that time he showed a little microscopic blood and cystoscopy showed a beginning recurrence. Fulguration was again used, but

after two fairly vigorous treatments there was not the response that there should be and operation was advised. This was done in May 1921 and to my surprise I found much more of a tumor outside the bladder wall than there was showing in the bladder, the whole growth being about 4 cm. in greatest diameter. Microscopic study by Dr. J. Homer Wright was as follows: "The specimen contains a tumor about 4 cm. in diameter involving the wall of the bladder projecting slightly from the mucosa with a rough surface. The tumor substance is gelatinous, translucent and mucoid. A microscopic examination shows adenocarcinoma with extensive mucoid degeneration. Diagnosis: Colloid carcinoma." He made a normal convalescence from this operation and during the next year he had several intensive x-ray treatments by Dr. L. B. Morrison. He was free of symptoms and showed a normal bladder on cystoscopic examination until the latter part of May 1924. During this time and in fact until the time of his death there were never any symptoms suggestive of gastro-intestinal abnormality. In May 1924 a slight change in the dome of the bladder was present although the patient was free of any symptoms. This was checked a second time and a definite progress was obvious and without waiting for further symptoms, I operated in June 1924 believing that there might be as at the first time more growth outside the bladder wall than within. I resected the whole area with a wide margin doing a transperitoneal operation and not at any time coming near the scar. He again made a rapid and normal convalescence. The report from the laboratory was as follows: "A specimen consisting of a section of bladder wall with peritoneum and fat. A small superficial ulceration of the mucosa. The wall contains a tumor mass $2\frac{1}{2}$ by 4 cm. which is hard and fibrous with small, translucent areas. A microscopic examination shows groups of large, atypical epithelial cells invading the wall of the bladder. The fibrils of the reactionary stroma are separated by a granular, pink-staining fluid. The cells are often vacuolated and their small, deeply staining nuclei appear close to one side of their walls. They resemble the seal-ring type. The histologic appearances present a type of carcinoma which is rarely found in the bladder. Diagnosis: Carcinoma—mucous or colloid type." Following this he again had x-ray treatments for nearly a year. He was free of symptoms again for a year and a half when he began to have persistent bladder irritability. Cystoscopies showed no sign of recurrence and the scar itself felt perfectly soft and free of any growth. I hoped that the symptoms might be due to a slight colon prostatitis which he did have, but on January 22, 1926, in spite of a normal feeling scar and no symptoms other than the bladder irritability, the cystoscopy showed a beginning change in the fundus of the bladder. On January 30, 1926 Barringer of New York came on to see him in consultation, the hope being that he might feel that radium would offer something that surgery up to date had not been able to accomplish. The abdomen was opened to explore and an extensive carcinomatosis was found throughout the pelvis and peritoneal cavity in general. The bladder was not opened as it was obviously a hopeless situation. From this time on the patient slowly went downhill and died in December 1926. During all this time there was no further evidence of bladder invasion judging from the symptoms. A fecal fistula developed which closed during the summer to a large extent so that the patient was getting about in the country and playing a little golf. The diagnosis on a small nodule taken out at the last operation was the same as the first two.

The second case was a woman of forty-six seen November 10, 1926. Her past history was unimpor-

tant. Six years before while in China she had a lot of frequency and burning and was told by an army doctor in Pekin that she had cystitis. As she remembered it this bothered her only for about a week. She had no more trouble with her bladder until three years ago when she passed so much mucus in the urine that she reported to a physician who after several examinations told her that he could find nothing abnormal. She had no further trouble until March 1926 when she passed blood in the urine but as she wanted to go abroad again she said nothing about this, although the blood has continued in the urine up to the time of reporting in November. General examination showed a normal, healthy woman. Cystoscopy easily done; both ureters free. The bladder mucosa in general looked normal. A tumor of the fundus of the bladder which looked like a papilloma about the size of a hen's egg with a sloughing surface was seen. Operation advised. On November 18th operation was done. A midline suprapubic incision; bladder opened well to one side of the growth. Peritoneum opened, the intestines walled off and a wide resection of the whole tumor was done. This involved taking out about a third of the bladder. There was no evidence of implantation in any of the neighboring organs although the peritoneum was definitely involved. The peritoneum was closed without drainage. The bladder was closed without suprapubic drainage and a catheter placed through the urethra. The patient made a surprisingly rapid and uninterrupted convalescence. There were never any further bladder symptoms. On December 20th the patient had an x-ray treatment and the next day began to have abdominal cramps. These continued with a great deal of belching of gas. The bowels moved freely, no distention, no localized tenderness. This attack quieted down with the exception of the belching of gas. It seemed probable that it was due to the reaction from the radiation. On that day there was nothing suggesting a mass in the abdomen. The patient was not obese and any beginning growth should have been readily felt. On January 6th patient was seen having symptoms of intestinal obstruction. On examination she had a hard, non sensitive mass extending well up to the umbilicus on the right and nearly so on the left. She was seen in consultation by Dr. F. G. Balch and on the basis that the rapidity of growth was more than should be expected from malignancy and accordingly suggested some inflammatory condition, operation was done. This showed that the whole pelvis and lower abdomen was filled with a tumor mass so rapidly growing that it was showing necrosis in several places. One small nodule was removed for examination and the wound closed. Patient slowly failed and died in ten days. The reports by Dr. Lawrence W. Smith from her specimens are as follows:

The first one says "Specimen consists of a portion of the bladder wall in which there is an ulcerated area 5 cm. in diameter on the mucosal surface. The edges of the ulceration are raised and scalloped and the base is markedly injected and covered with necrotic material. The tumor seems definitely to be invading the peritoneal surface. It feels very firm and indurated on palpation and cut surface confirms the impression that it has already invaded the bladder wall from the inside. Section microscopically consists of definite colloid carcinoma. The epithelial elements are very rapidly growing and many mitotic figures are seen throughout the section. There is an abundance of colloid being laid down. The invasion seems to be widespread. The histological findings are identical with colloid carcinoma of the gastro-intestinal tract, and if primary in the bladder it has arisen from an embryonic rest. Further sections will, I hope, demonstrate this feature. Diagnosis: Colloid carcinoma."

The second one says "Specimen consists of a piece

of tissue about 4 cm in its greatest diameter. There is a semblance of a capsule around about half of the specimen suggested that this may have been a lymph node. It is friable, yellowish grey in color and contains many gelatinous areas 1 mm or so in size. Microscopic section consists of definite carcinomatous cells which are tending to reproduce alveoli. The process is infiltrating widely the connective tissue stroma, and there is much colloid being laid down by the cells. Mitotic figures are not infrequently seen. Diagnosis: Colloid carcinoma."

At autopsy Dr. Tracy Mallory found that the growth had invaded both ovaries and that the mass was a very rapidly growing metastasis in these organs. No primary focus was found elsewhere in the body. The bladder itself showed no evidence of recurrence.

In 1915 while working with Dr. Cabot we operated on another case the details of which are unfortunately lost but where the diagnosis was colloid carcinoma and here as in the other two cases there was a growth which cystoscopically looked like sloughing papilloma on the fundus of the bladder. This case died eighteen months later from what was probably metastases in the chest.

In going over the literature on this subject very few cases have come to light and up to date if we include everything that could come under this classification only eighteen besides the two here reported have any claim to this diagnosis and of these eighteen cases many of them do not fulfill the requirements of absolute proof of a primary growth nowhere else in the body or so long a time free of symptoms not only in the bladder but elsewhere that we can be certain of its primary origin in the bladder. The best summary of this disease is given by Ewing in his book "Neoplastic Diseases": "The organs of cylindrical and mucoid adenoma and carcinoma in the bladder suggest an origin from mucous glands which are not always attributed to the structure of this organ, yet short, tubular glands are regularly found in the bladder mucosa, especially in the trigone and about the urethral orifice. They have been variously interpreted as aberrant prostatic glands (Virchow), or urethral glands (Aschoff), or as the result of snaring off of papillae by thickened connective tissue septa. Yet the well known difficulty of distinguishing secondary and primary carcinoma of the bladder and the occurrence of somewhat similar conditions from secondary invasion by intestinal carcinoma leaves a reasonable doubt as to the exact origin of some of the colloid carcinomata. Montfort, for example was able to find only four primary glandular carcinoma of the bladder in eighty-three cases fully examined."

Stoerk in 1899 made a careful study of the pathology of bladder tumors as did also Mandelbaum in 1907 and both of them point out that it is perfectly possible for a mucous carcinoma to develop from the cells of the bladder mucosa, without having to consider aberrant cell rests, either because of a previous cystic cystitis,

where there is a production of mucus from the follicles, or from mucous glands which often exist in the trigone. It is also probable that a few of these cases may have been the mucous degeneration of polypoid growths, as for instance, the case report by Haake in 1895 which showed on autopsy a small, pedunculated tumor on the lower surface of the bladder about 2 cm posterior to the trigone.

Levenant in 1923 in reporting a case believes that the tumor was an epithelioma of allantoid origin which had developed in the embryonal debris included in the tissue at the summit of the bladder. Two other cases operated on, one by Bugbee and one by Barringer, might conceivably come in this same class as they are tumors of the fundus of the bladder, the larger part of which was outside of the bladder wall; but inasmuch as the majority of the tumors described were either definitely not on the fundus or were too diffuse to have the original site of growth at all definite, this origin cannot be considered in the majority of cases.

A study of the facts that are available in these twenty cases do not give us any data that is really important in making a differential diagnosis clinically. Whether the mucous which was passed in the second case reported should have led to suspicion is hard to say as it is the only record of that sort in this series. Apparently the difference in sex is not important as seven were female and thirteen were male. The age also is not different from what would be expected as the majority of them were grouped pretty closely in the fourth and fifth decades, only two cases being below forty and only two cases being above seventy. The length of symptoms was mentioned in ten of the cases and if anything adds somewhat to the confusion because they vary from three months to fourteen years and in the two cases with the long period of cystitis there is the strong suggestion that the early symptoms were in fact due to the cystitis and that at some period late in the disease the tumor itself developed possibly with some actual connection with the earlier inflammation. The first ten of these cases were recognized only by autopsy and in seven of these cases there is not sufficient data given to prove conclusively that the growth was actually primary in the bladder. Of the last ten cases eight were operated on and of these there is autopsy confirmation of the origin of the growth in the bladder in two cases. The end result in all of the cases but one is known and they have all died as a result of the disease except the case operated on by Dr. Bugbee and that man is alive and shows no evidence of recurrence nor any sign of metastases.

Conclusion: from what we know of this tumor it may be slow in developing, may develop on the basis of a previous chronic cystitis, metastasizes late, but is very resistant to treatment

and tends to spread in spite of anything that can be done for it.

BIBLIOGRAPHY

- Barringer, B. S.: Colloid adenocarcinoma of the bladder. *Surgery, Gynecology and Obstetrics*, Vol. 30, Jan., 1920.
- Bugbee: Personal communication.
- Chute, A. L., and Crosbie, A. H.: Mucous cancer of the bladder. *The Boston Medical and Surg. J. Vol. CLXXVII*, No. 17, Oct. 24, 1912, p. 583.
- Ewing: "Neoplastic Diseases."
- Green and Bugbee: Gelatinous carcinoma of the bladder. *Trans. of N. Y. Surgical Society in Ann. of Surg.*, Vol. 62, Oct., 1915.
- Lavenant, A.: Epithelioma colloïde d'origine allantoïdienne du sommet de la vessie. *J. d'urolog. med. et chir.*, Par., 17: 42048, Jan., 1923.
- Mandlebaum, F. S.: The Pathology of New Growths of the Bladder. *Surgery, Gynecology and Obstetrics*, Vol. 5, Sept., 1907.
- Weissenbach, J.: Contribution à l'étude du carcinome colloïde de la vessie. Thesis, Fribourg, 1917.
- (From Weissenbach)
- Aschoff, L.: Pathologische anatomie. Jena, 1909.
- Blum, V.: Ueber den Gallertkrebs der Harnblase. Verhandlungen der deutschen Gesellschaft für Urologie. Kongress in Wien 11-13. Sept., 1911, p. 481. Berlin und Leipzig, 1912.
- Ueber den Gallertkrebs der Harnblase und seine Beziehungen zur Zystenbildung in der Schleimhaut des Harntraktes. *Wiener Medizinische Wochenschrift. Urologen-Festnummer*, No. 13, 28, März, 1914, p. 616.
- Borst, M.: Die Lehre von den Geschwulsten. Weinbad, 1902.
- Brancu, A.: Précis d'histologie. 2nd edition. Paris, 1910.
- Ehrlich, E.: Gallertkrebs der ekstrophierten Harnblase. Beiträge zur klinischen chirurgie. Band XXX, p. 581.
- Fabre-Domergue: Les cancers épithéliaux. Paris, 1898.
- Forgie, E.: Précis de pathologie externe. 4th edition. Paris, 1908.
- Gegenbaur, C.: Lehrbuch der Anatomie des Menschen. 7. Auflage Leipzig, 1903.
- Haake, O.: Ueber den primären Krebs der Harnblase. Inaugural-Dissertation. Freiburg i. B., 1895.
- Heilmann, M.: Ueber 37 im pathologischen Institut zu Berlin in der von Zeit 1859 bis zum 1. August, 1868, vorgekom-

- mene von Krebs der Harnblase. Inaugural-Dissertation. Berlin, 1868.
- Heilmann, C.: Ueber Bildung der Gallerte im Carcinoma gelatinosum. Inaugural-Dissertation. Greifswald, 1897.
- Huguenin, B.: De la détermination du foyer primitif dans les tumeurs malignes généralisées. Semaine Médicale due 20 septembre 1909, Paris.
- Kaufmann, E.: Lehrbuch der speziellen pathologischen Anatomie für Studierende und Aerzte. 5. Auflage. Berlin, 1909.
- Klein, F.: Ueber Gallercarcinome. Inaugural-Dissertation. München, 1895.
- Marwedel-Chevasus: Atlas Manuel de chirurgie generale. Paris, 1908.
- Montfort, E.: Contribution à l'étude du rôle de las prostate dans la production des tumeurs épithéliales infiltrées de la vessie. These. Paris, 1903.
- Nicolas, A.: Contribution à l'étude du cancer latent de la vessie. These. Lyon, 1900.
- Posner, C.: Ein Fall von primären Carcinom der Harnblase. *Berliner klinische Wochenschrift*. No. 26, 25. Juni, 1883, p. 392.
- Rauenbusch, L.: Ueber Gallertkrebs der Harnblase. *Virchows Archiv für pathologische Anatomie und Physiologie und für klinische Medizin*. Band 182, p. 132, Berlin, 1905.
- Sauter, R.: Ein Fall von Gallercarcinom der Harnblase. Inaugural-Dissertation. München, 1898.
- Schmaus, H.: Grundriss der pathologischen Anatomie 9. Auflage, neu bearbeitet von G. Herxheimer. Wiesbaden, 1910.
- Scharp, H. C.: Primary colloid carcinoma of the bladder. *Transactions of the Pathological Society of London*. Vol. XLVII, p. 168, 1896.
- Sperling, A.: Zur Statistik der Primären Tumoren der Harnblase. Inaugural-Dissertation. Berlin, 1882.
- Stanischew, A. D.: Ueber Carcinoma gelatinosum mit kasuistischen Beiträgen aus dem Material der chirurgischen Universitäts Klinik zu München und einer Statistik aus dem Material des Münchener Pathologischen Institut. Inaugural-Dissertation. München, 1910.
- Stoerk, O.: Beiträge zur Pathologie der Schleimhaut der harnleitenden Wege. Beiträge zur pathologischen Anatomie und zur allgemeinen Pathologie. Band 26, p. 367. Jena, 1899.
- Stohr, Ph.: Lehrbuch der Histologie. 12. Auflage. Jena, 1906.
- Testut, L.: Traité d'anatomie humaine. 5th edition. Paris, 1905.
- Zagourskaia, M.: Contribution à l'étude des carcinomes dit muqueux du sein. These. Geneve, 1911.
- Zausch, C.: Zur Statistik des carcinoma vesicae. Inaugural-Dissertation. München, 1887.

THE DIAGNOSTIC AND PROGNOSTIC VALUE IN PSYCHIATRY OF A SENSE OF HUMOR*

BY DONALD GREGG, M.D.

HUMOR, like insanity, is very difficult of definition. Max Eastman recounts in his book on the sense of humor: "When I told Bernard Shaw that I was writing this book, he advised me to go to a sanitarium. 'There is no more dangerous literary symptom,' he said, 'than a temptation to write about wit and humor. It indicates a total loss of both.'" In a recent number of the *Forum* humor is defined as "that which makes us feel ridiculous when we try to define it." Thus forewarned I shall not try to define humor but, in the words of the orator, I shall merely "refer to what I allude," and, resorting to the moronic refuge of simile, consider humor as comparable to an unexpected detour, shorter and more pleasant than the main road.

A sense of humor, however, is more easy of definition and can be considered as a quality in consciousness that recognizes humor. I had almost said "recognizes and reacts to humor," but our threshold of reaction may be lowered or raised. Dean Briggs of Harvard once said, when someone questioned President Eliot's sense of humor, "Oh yes, he has a sense of humor, but it is quite unreliable."

*Read before the American Neurological Association, Atlantic City, May, 1927.

To possess a sense of humor the following factors seem to me essential,—first, a keen apprehensive sense; secondly, an altrocetric or extrovert type of personality; thirdly, an absence of caecophoria; and lastly, in any individual case there should exist a set of human values shared in common by observed and observer. Obviously, a temporary or lasting variability can exist in any one or more of these four factors. Has such variability or modification any diagnostic or prognostic significance?

We are all conscious in simple fatigue of a temporarily decreased appreciation and of a temporarily decreased sense of humor. With increased appreciation under the stimulation of tea or coffee we may note an increased sense of humor, but even in this simple variation of the sense of humor, increased euphoria and lessened inhibition may color the picture. If Freud is correct in saying that wit represents an economy of inhibition, while humor represents an economy in the expenditure of the feelings, we should expect wit rather than humor to increase with lessening of the inhibitions.

In cases showing intellectual deterioration such as senile dementia, we commonly find a decreased sense of humor. It is not rare to ob-

tain in such cases a history that—"Mother used to have a sense of humor," or that "One of the first things we noticed was that Mother seemed to be losing her sense of humor." As intellectual deterioration progresses, the sense of humor commonly decreases.

In manic-depressive cases we naturally have a varying picture. In the manic state we commonly find a heightened apperception, increased euphoria, and decreased inhibition. All three of these factors tend to increase the individual's sense of humor. Not uncommonly patients regret the passing of the delights of the hypomanic phase. In the depressed state an heightened apperception may exist and a decrease of inhibition, but the cacophoria that exists dominates the picture.

In considering a differential diagnosis between schizophrenia and cyclothymia, a sense of humor is a valuable diagnostic aid. Kretschmer states that schizoids are, on the average, devoid of a sense of humor. McDougall notes that the schizoid takes himself too seriously to be humorous. "His self is something with which he is so intensely preoccupied that he cannot view it objectively, cannot view it as part of humanity in general. He is, therefore, as little capable of laughing at himself as was Don Quixote and so he is denied this great means of renewing and deepening his rapport with his fellow men and he cannot bear to be laughed at or to play the fool because he is incapable of joining in the laughter of which he is the object." Perhaps we do the schizoid injustice in assuming a lack of a sense of humor. His failure to react to what seems humorous to those about him may be due to a different set of human values. He sometimes seems to get amusement in a field of thought which he does not share. But if so, this unintelligible amusement is of itself diagnostic in value. We hesitate to make a diagnosis of schizophrenia in an extrovert personality. When a sense of humor is present, a diagnosis of schizophrenia, in my experience, should be made with great caution.

Euphoria presents a mixed condition, or a condition easily confused with that which arises when inhibition is decreased. With alcohol, inhibitions are decreased and cacophoria is lessened. McDougall believes that with alcohol an individual shifts towards the extrovert end of the scale of human personality. Remembering Freud's theory that wit involves an economy of

inhibition, we should expect with alcohol an increase of wit rather than of humor.

In the early stages of paresis we may occasionally find an increased apperception as well as diminished inhibition, and consequently an increase of both wit and humor. I have heard of a case of frontal tumor that showed as an early symptom a marked tendency to make puns which later became more and more obscene. Puns being classed as a low form of wit, rather than humor, the mechanism here presumably is one of lowered inhibition.

Recently I undertook to study the history of some two hundred and forty-three past editors of the *Harvard Lampoon*. These were men fifteen to fifty years out of college, who, while in college, had published writings or drawings of sufficient quantity and of such humorous quality as to cause them to be picked out from the undergraduate body as editors of the college humorous paper. Among them I found five cyclothymic cases, but no cases of schizophrenia. Among the editors of the *Harvard Crimson*, the college daily newspaper, I found both cyclothymics and schizoids. Obtaining data regarding such cases is necessarily difficult. No exact conclusions can be drawn as the data are too inaccurate and incomplete, but the surmise suggested is that in a group of persons picked for their sense of humor, you can expect to find few introverts or facultative schizophrenics.

From the point of view of the individual case it seems logical that with a decrease in cacophoria, an individual becomes less introverted; and that with more extroversion, his sense of humor should increase, or conversely, that with an increase of the sense of humor, it can be assumed that the individual is becoming more extroverted and normal.

As therapists, our general aim is to increase a patient's extroversion by lessening his cacophoria through ameliorating his physical condition and by occupational therapy to increase his extroversion. In so far as psychoanalysis increases introversion, it seems to me a dangerous therapy.

Conclusions: Study of an individual's sense of humor and of variations in this quality is of value, first, as a delicate index of deterioration when it decreases; secondly, as an aid in the differential diagnosis between schizophrenia and cyclothymia; thirdly, as a delicate index of improvement when it re-appears and increases in a given case.

NECROSIS OF TERMINAL PHALANX OF FINGER (A Method of Treatment)

BY CARL BEARSE, M.D.

THE method of treatment to be described applies to the terminal phalanx of a finger that has become destroyed as a result of infection. The prevention of this condition does not come

within the scope of this communication, so it will not be discussed.

If the destruction of a terminal phalanx is but partial, this method of treatment is not in-

dicated, as the removal of the necrosed spicules through a lateral incision is sufficient.

Clinically, the finger is swollen, tender, and has one or more openings from which pus can be expressed. A history can be obtained to the effect that the duration of the infection is of several weeks, and that the pain and throbbing are not as marked since drainage was established. The diagnosis of necrosis of the terminal phalanx is made by X-ray.

Treatment: An inverted "U"-shaped incision is made around the end of the finger; the flaps are separated and all of the necrotic bone is removed. Gauze packing is placed between the flaps to facilitate drainage. This packing is changed every two days until the drainage be-



FIGURE 1. Case I. Roentgenogram showing destruction of the terminal phalanx of thumb, taken before operation.

comes scanty, when it is omitted. The flaps are then placed in apposition, without suturing, and kept so until the finger is healed.

The object of this operation is to preserve the tip of the finger and nail. The resulting scar does not impair the tactile sense and is not painful. If the epiphysis is not involved, normal motion may be obtained at the terminal joint, while if the epiphysis is necrosed, ankylosis will result. Some regeneration of bone usually takes place, varying in degree from a spicule to complete regeneration, depending on the amount of periosteum with osteoblasts from the cortex that has escaped destruction¹. If only a small particle of bone should regenerate, there will be some shortening of the distal phalanx and deformity of the nail, but the cosmetic result will be far superior to an amputated finger.

ILLUSTRATIVE CASES

CASE I. Miss L. L. Age 20. Referred by Dr. S. H. Hoberman to the Beth Israel Hospital on February 25, 1921.



FIGURE 2. Case I. Roentgenogram showing the extent of the regeneration of the terminal phalanx of the thumb three months after operation.



FIGURE 3. Case I. Roentgenogram showing complete regeneration of the terminal phalanx of the thumb.

History: The left thumb was infected five weeks previous. It had been incised and drained, and while the pain and swelling were much less, a thick purulent discharge had persisted.

Examination: The left thumb was greatly swollen and tender. There was a small opening opposite the terminal phalanx, on the palmar surface, from which much thick pus could be expressed.

An X-ray was taken by Dr. S. A. Robins, which showed necrosis of the terminal phalanx of that thumb. (See Figure 1.)



FIGURE 4. Case I. Photograph showing present appearance of thumb.

Treatment: Operation at Beth Israel Hospital on February 28, 1921. An inverted "U"-shaped incision was made around the thumb and the necrotic bone was removed. Gauze packing was placed between the flaps and a dressing applied. The after care was as already described.

Result: The whole phalanx regenerated. There is normal motion at the terminal interphalangeal joint. Figure 2 shows the extent of bone regeneration three months after the operation. Figure 3 shows the



FIGURE 5. Case II. Roentgenogram showing destruction of the terminal phalanx of the index finger, and elevation of the periosteum of the middle phalanx, taken before operation.



FIGURE 6. Case II. Roentgenogram of the anterior-posterior view of index finger, showing the small fragment of bone that has regenerated after removing all of the necrotic terminal phalanx.

X-ray appearance of the phalanx, taken over six years after the operation. Figure 4 shows the present appearance of that thumb.

CASE II. Mrs. H. H. Age 40. Cashier. Referred by Dr. G. A. Haines on October 13, 1926.

History: The right index finger was infected seven weeks previous. It had been incised on September 6, 1926, and some pus obtained. While the pain had subsided, the swelling and drainage of pus had persisted.

Examination: The right index finger from the tip down to the hand was greatly swollen. On the palmar surface, opposite the middle phalanx, there was a small opening from which thick pus could be expressed.

X-rays had been taken by Dr. A. H. Warren, which showed necrosis of the terminal phalanx and raising of the periosteum of the middle phalanx. (See Figure 5.)



FIGURE 7. Case II. Roentgenogram of the lateral view of index finger, showing the small fragment of bone that has regenerated.

Treatment: Operation at Roxbury Hospital on October 14, 1926. An inverted "U"-shaped incision was made around the tip of the finger; the flaps were separated, and the necrotic distal phalanx was removed. The distal head of the middle phalanx was

absent of motion at the terminal joint, the patient is greatly pleased with the result. She is back at her work as cashier and uses her right index finger satisfactorily in making change. Figures 6 and 7 show roentgenograms of that finger taken on March



FIGURE 8. Case II. Photograph showing lateral appearance of index finger seven months after operation.

roughened, but it was not molested. Gauze was packed between the flaps, and a dressing applied. The after care was as previously described.

Result: Only a small fragment of bone regenerated, causing the terminal phalanx to be shortened and the finger nail to become slightly deformed, but the tip of the finger had been preserved. Despite the

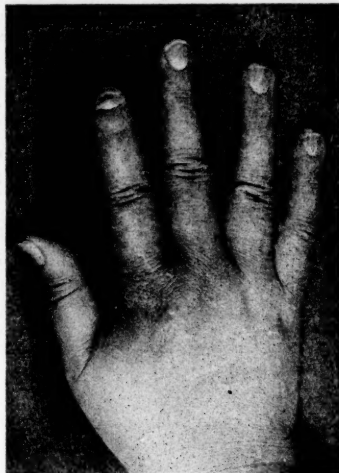


FIGURE 9. Case II. Photograph showing the index finger with nail seven months after operation.

30, 1927, six and one-half months after operation. Figures 8 and 9 show photographs of that finger taken seven months after operation.

REFERENCE

- 1 Macewen, Sir William: *The Growth of Bone*. 1912. Quoted by Boyd, William. *Surgical Pathology*. Philadelphia: W. B. Saunders Company, 1925. P. 691.

MEDICAL PROGRESS

PROGRESS IN DERMATOLOGY

BY HARVEY P. TOWLE, M.D.

EPIDERMATOPHYTOSIS

At its Golden Anniversary Meeting the American Dermatological Association held a symposium on toptic Epidermatophytosis. Dr. Charles J. White of Boston, Dr. Fred C. Weidman of Philadelphia and Dr. Charles M. Williams were the readers. Between them they covered the field most completely and from all angles. Their papers may be found, in full, in the *Archives of Dermatology and Syphilology*, April, 1927.

General

These papers bring out several important facts concerning Epidermatophytosis.

From the statistics it would appear that the disease has increased very rapidly since 1910.

Weidman and White explain this seeming increase, at least in large part, on the ground of increased recognition due to the greater amount of clinical and laboratory study given to the disease since that year.

The disease is not limited to one locality or to one country. It occurs in this country from Maine to California and is found not only all over Europe but in Asia as well. Indeed, it is supposed to have first been described in India.

It affects all ages.

It is apparently a disease particularly of the well-to-do.

Clinical

Clinically, ten or more varieties of the disease have been described, vesicular, macular, seal-

ing, fissured, etc. Between 60% and 70% of all cases are either of the vesicular, the scaling or the macular type.

A dominant feature of the disease is, as Weidman points out, its intertrigenous character. In a very large proportion of the cases it affects chiefly the webs and sides of the fingers and toes or, in a lesser percentage, the palms, soles, axillae or genito-crural regions. Occasionally the disease occurs on the thighs, arms or the trunk in the form of a dermatophytide.

The Vesicular Form

This is the commonest type and is practically limited to the fingers, toes, palms and soles. The eruption is composed of little vesicles of uniform size, tense with serous contents and usually discrete though not infrequently confluent. Many of the vesicles bear in their centres a minute, dark steel-blue point which, according to Dr. White, is almost always suggestive of epidermatophytosis. The vesicles are deep seated and therefore do not rupture easily. Redness and swelling, often intense, accompany the eruption. Itching, sometimes most intense, is almost never lacking.

The Scaling Form

This occurs on the same sites as the vesicular form, the fingers, toes, palms and soles. It is dry and characterized by its abundant, persistent scaling. It is noteworthy that when a scale is forcibly detached bleeding does not follow.

The Macular Form

This is seen most often in the genito-crural region. By extension it may involve the perineum and the peri-anal regions. The primary manifestation is a bright red patch with sharply scaling edges with a less red, more or less scaly centre. As the result of heat, moisture and friction the affected parts may become eroded and covered with a glairy, sticky exudate. Fissures may form in the depths of the folds. Itching is constant and often severe enough to prevent sleep.

Less common forms are the fissured, the papular, the callused and that of the nails.

Laboratory

Whereas it was once believed that all cases of so-called epidermatophytosis were due to the same cause, the laboratory soon discovered that this was not true. Weidman says that cases, clinically indistinguishable, have been proved hypermycotic, blastomycotic, trichophytic or even bacterial. The term epidermatophytosis is therefore a misnomer as it refers to but one etiological variety. A better term, Weidman suggests, would be, in the absence of definite knowledge of the precise species concerned in a

given clinical case, "ringworm of the toes" or, in generalized infections, "dermatophytosis" or even the French term "epidermomycosis".

Some observers have doubted the existence of a true dermatophytide but Weidman quotes cases reported in which the same fungus was recovered from the dermatophytide as from the original focus. He also reports cases in which the fungus has been recovered from the blood.

The demonstration of the fungus is not always easy. In some instances prolonged research has to be made before the fungus is found. Often positive and sterile vesicles exist side by side. From this the inference is drawn that the sterile vesicles are caused by the toxins of the organism.

Transmission of the Disease

The belief of all the participants in the symposium is that the disease is transmitted by contact. Dr. White mentions wool, leather, handles of golf clubs, the floors of bath rooms and all articles which have been in contact with an infected skin as possible sources of transmission. Dr. Weidman made some experiments on himself. For a week he wore pieces of infected muslin between his toes. In every instance the inoculations were negative although the controls were all positive. Other writers have tried similar experiments and have also failed. It was only when macerated or broken skin was inoculated that the experiments were successful.

In considering the question of transmission it is important to know how long the fungus remains viable. Weidman states that "apparently the fungus will remain viable from six months to a year."

Treatment

White, Weidman and Williams all stress the fact that present-day treatment is not always as successful as could be wished. The variety of methods is further proof of that fact. Among the remedies in vogue may be mentioned only those in most common use. Sulphur praecipitate perhaps heads the list because of its antiparasitic properties. It is used in ointment form in 5 to 10% strength, alone or in combination with such drugs as Benzoic acid (2:30) or salicylic acid (1-2:30). In the vesicular type crude coal tar is frequently employed, usually in paste form, sometimes pure. The x-rays have been found valuable chiefly in the dry forms. Preliminary curettage before treatment has strong advocates. Weidman states that many forms of fungi have a low lethal thermal point hence heat in treatment and boiling for sterilization are advocated. Weidman states further that inasmuch as bacterial infections have been demonstrated to hinder the development of many strains of fungi bacterial inoculation should be a rational method of treatment. Dryness of the parts affected should be maintained

as beyond question moisture favors the growth of fungi. Whatever method of treatment is preferred it is essential that penetration of the outer tissue layers should be obtained.

Years ago Jonathan Hutchinson said that to him who can read the skin is a better index of disease than the tongue or the thermometer. It is interesting to see how much in line with his saying is the present trend. Articles dealing with the interpretation of signs in the skin are constantly appearing. Recently, three have been published, viewing the skin manifestations from different angles.

The Skin in Children

Pajares writes (*Pediatría espan.* 15:125 (May) 1926) that special tendencies in children so modify the typical manifestations in the skin that their natural complexity is greatly magnified. He believes that certain signs in the skin can be interpreted as symptoms of an internal disturbance. For example, he would translate pallor, angioneurotic conditions, dryness, hyperidrosis and seborrhea in children as reflections of various internal abnormalities. A "cottony" white lustreless skin which hangs loosely, as if it were too large, he has always found associated with the thymicolymphatic constitution. The angioneurotic skin he associates with spasmodic hyperidrosis with rickets; a greasy skin with the exudative diathesis; and a loose skin with a tendency to phlyctenae.

Metabolism and the Skin

Falay (*Arch. f. Verdauung*, 39:13 (Oct.) 1926) approaches the subject more directly. He has investigated the calcium and magnesium metabolism in several types of skin disease and asserts that there is a close connection between the electrolytes and pathologic skin conditions. Eight cases of eczema examined all showed a disturbance in the electrolyte equilibrium but all in the same direction. In three cases the total calcium was increased. In two it was lowered. Nine cases of urticaria were studied. All showed a disturbance in the calcium, magnesium and purine metabolism. Four out of eight cases of psoriasis showed hyperglycemia; two an increased total calcium, three a lowered calcium; four increased magnesium, two diminished. In 32 dermatoses an antagonism between the total calcium and magnesium was found in 10 and between free calcium and magnesium in 19. Therapeutic experiments based on these calculations met with gratifying results.

Skin Antiseptics

Every man is apt to have his favorite antiseptic. Tinker and Sutton (*Ann. Surg.* 82:640 (Oct.) 1925) have tested the efficiency of a variety of those in common use such as iodine,

mercuric acid, Harrington's solution, mercuriochrome, acriflavine and acriviolet. Acriflavine, 5 per cent. in 50% alcohol, proved the most efficient. Next came acriviolet, 2 per cent. in 50% alcohol; then 5 per cent. alcoholic iodine; acriviolet in 10 per cent. aqueous solution and Harrington's solution. Pieric acid, 5 per cent. in 95 per cent. alcohol, and mercuriochrome, 5 per cent. in 50 per cent. alcohol, were the least effective of all.

Radiotherapy

In the last Progress, mention was made of the apparently successful treatment of lichen planus by means of roentgenotherapy of the spinal sympathetic ganglia.

Gourgerot and Filliol (*Bull. Soc. franc. de dermat. et syph.* 33:191, 1926) treated a case of lingual and buccal lichen planus after that method and failed. Six weeks after treatment cutaneous lesions appeared, especially on the region which had been exposed to the rays.

Gouin and Bienvenue (*Bull. Soc. franc. de dermat. et syph.* 33:657, 1926) inspired by their results with the Roentgen ray in the treatment of lichen planus tried suberythema doses over the cervical and dorsal spine in nine cases of erythema multiforme. The eruptions disappeared but returned.

Lupus Erythematosus

J. Schaumann (*Ann. de dermat. et syph.* 7:193 (April) 1926), after a microscopic examination and study of three acute, diffuse cases of lupus erythematosus and of eight chronic, localized cases advances as a theory of pathogenesis that the skin lesions are a reflection of a lymphogranulomatosis, a benign process. Exceptionally it may develop into a malignant acute form which terminate in fatal septicemia. The lymphogranulomatosis of lupus erythematosus is closely analogous to tuberculous pseudoleukemia. Tuberculous lesions may coexist. A follicular tuberculosis may be the origin but when the lymphogranulomatosis appears the tuberculous lesions may gradually disappear which accounts for their absence at necropsy. Schaumann concludes that erysipelas persists of the face as well as the skin manifestations of lupus erythematosus are probably induced by tuberculous toxins or by cell substances from affected glands. Guinea pig inoculations are negative.

Lupus Vulgaris

Several articles have appeared on the treatment of lupus vulgaris. Bizard and Marcron (*Bull. Soc. franc. de dermat. et syph.* 33:15, 1926) have used the method of Auregan in nine cases. This method consists of a thorough preliminary curettage followed by a liberal application of powdered permanganate of potash over

which a slightly moistened compress is placed. They recommend the method for obstinate cases with ulceration.

Pasini (*Gior. ital. dermat. e sifil.* 67:70 (Feb.) 1926) reports excellent results with hypodermic injections of an Italian preparation of old tuberculin in doses ranging from 0.000001 to 0.009 gm.

Drohan (*Bull. Soc. franc. de dermat. et syph.* 33:482, 1926) treated with success a case of lupus vulgaris of ten years' duration which involved extensive areas over the nose and cheeks after a method which differed from that of Auregan only in that after the preliminary curettage he applied, instead of permanganate powder, a formula of Darier's. This was Antimony trichloride 20; Salicylic Acid 20; Cresote 40; Hydrous Woolfat 80; Extract of Opium 4; Procaine Hydrochloride 4.

Milan and Perin (*Bull. Soc. franc. de dermat. et syph.* 33:621, 1926) report a case of lupus on which a tumor developed which, clinically, suggested an epithelioma. Under the microscope it was found to be a leiomyoma with malignant characteristics.

Psoriasis

One of the curious by-products of insulin therapy is that it has been used in the treatment of psoriasis, occasionally with good results. Ravaut and Ducourtieux, for example, report (*Bull. Soc. franc. de dermat. et syph.* 33:99, 1926) that insulin seemed to act favorably in cases of psoriasis with hepatic insufficiency. The improvement however was only temporary.

Lortat-Jacob and Pelliser (*Ibid.* 33:101, 1926) report that in two cases of psoriasis in which the cholesterol content of the blood was 1.97 and 1.90 Gm. per liter insulin benefited but was of no benefit in two cases with an insulin content of 2.85 and 2.65 Gm. per liter.

Lacroix (*Ibid.* 33:115, 1926) has also been investigating the use of insulin in psoriasis. He found that when there was a high cholesterol content in the epidermal scales there was also a hypercholesterinemia. In such cases, he reports, there was often a fading of the eruption after the administration of insulin with a coincident diminution of the cholesterol content in both blood and scales. He concludes that since patients with high cholesterol content seem to resist such infections as tuberculosis, it would seem advisable to continue the local treatment of psoriasis without resorting to the use of insulin.

Lipshutz (*Arch. f. Dermat. u. Syph.* 150:195 (May) 1926) states that the evidence favors the opinion that the nuclei of the epithelial cells are the primary point of attack in psoriasis noxa. He says that by means of a particular technic he has demonstrated in psoriasis a characteristic change in the nucleus of the epithelial cells of the acanthotic prickle cell layer. This

change consists of a deeply staining inclusion mass within a hyperchromatic nuclear membrane. In well-developed cases these changes are numerous and in part present an unmistakable topographical arrangement. He is inclined to connect the nuclear inclusions with the Chlamydozoa.

Versari (*Riforma. med.* 42:410 (May) 1926) reports on a new method of treatment of psoriasis, that of intramuscular injections of Potassium and Sodium Tartobismuthate. Out of twenty-one cases so treated, the eruption disappeared without local applications in twelve. Relapses usually occurred after a period of freedom varying from three to sixteen months. In three instances the disappearing eruption left leucodermic spots behind. The reporter does not tell us what distinguished the cases in which the treatment acted from the cases in which the eruption was uninfluenced.

Radiation of the thymus has already been reported on more or less favorably as a method of treating psoriasis. Leszczynski (*Dermat. Wechsch., supplement*, 83:1877 (Dec.) 1926) considers diathermy more reliable for gland stimulation than roentgenotherapy or the administration of glandular extracts. He has used diathermy of the thymus in eight cases of psoriasis with excellent results in seven. His cases were all particularly stubborn and the lesions were very extensive. He placed the active electrode beneath the intraclavicular notch and the neutral electrode between the scapulae and parallel to the spine. A current of 700 to 1200 milliamperes was used. Treatments were given daily, ten minutes at first, gradually increasing to fifteen or twenty. If tachycardia ensued treatments were suspended until the pulse was normal again. On large, old patches local treatment with the x-rays is advised to supplement diathermy.

J. O. Parker is an advocate of the use of the Roentgen rays in the treatment of psoriasis (*J. Radiol.* 6:389 (Oct.) 1925). He asserts that a complete cure is possible in 85% of all cases of psoriasis by means of the Roentgen ray alone, provided the patient gives full cooperation. A general stimulation of the organic functions, he says, may be expected during and following the course of treatments. With guarded dosage, succeeding generations will not suffer from induced malformations.

CANCER

F. C. Wood (*J. A. M. A.* 85:1039 (Oct.) 1925) finds that nowhere in the literature is there evidence to prove that cancer develops immunity. Experiments on animals and experiments in the radiation of transplantable tumors both fail to convince. The rare cases of the spontaneous regression of human tumors must be explained on some other ground than that of immunity.

Wood then proceeds to give his views of the effect of radiation on cancer. It has, in his opinion, a direct effect on the cancer. The secondary effects on the surrounding tissue have nothing to do with the curative result except in a purely mechanical way. The scar tissue that results from the radiation of malignant tumors entraps those cells which escape a lethal dose and anchors them. The microscope has proved this. The mechanical effect of the scar tissue and the lowered blood supply, which is common to all scars, explain the late recurrences in situ. Wood declares that there is no satisfactory evidence for the conclusion that any process of immunization aids in the cure by radiation while there is much against that theory.

Crile (*N. Y. State J. M.* 25:1019, 1925) gives the methods of choice in the treatment of external cancer.

All cases of carcinoma of the skin, except the pigmented moles, should be treated by radium. The pigmented mole should be excised.

The electric cauterly should be used in early cancer of the gums or cheeks which do not require excision of the lymph nodes. In later cases complete excision of the entire associated lymphatic system should be performed.

Radium is recommended for early cancer of the lip. Late cases required a V excision.

Electric coagulation or cauterly is to be preferred for early cancer of the tongue as it is as effective as radium and less painful.

HERPES SIMPLEX; ZOSTER; VARICELLA

The debate on the nature of herpes simplex and herpes zoster and their relationship to each other and to variella is still in full swing.

Delmas (*Bull. Soc. franc. de dermat. et syph.* 33:156, 1926) and Spillman and Crehange (*Ibid.* 33:454, 1926) write of zoster and variella. The first reports the case of a man of 48 with a supra-orbital zoster accompanied by a variella. No one else in his neighborhood had either disease. There were, however, in the community numerous cases of zoster and a few of variella. Spillman and Crehange report two cases. In one a man developed zoster fifteen or twenty days after he had seen his father with zoster. Twelve or fifteen days later his child developed variella. In the second case zoster appeared in a woman about fifteen days after her child had developed variella.

Perdrau (*Brit. J. Dermat.* 39:1 (Jan.) 1927) discussing this question states that some cases of zoster either are caused by a similar action of the virus of variella or at least contain that virus in their characteristic skin lesion.

Roxburg (*Brit. J. Dermat.* 33:13 (Jan.) 1927) concludes that a large number of cases of spontaneous zoster are due to the same virus as variella.

Bedson, in the same number, discussing "The Pathological Relationships of the Herpetie Dis-

eases," states that he has isolated five strains of the virus of herpes, two from labial herpes in pneumonia, two from spontaneous labial herpes and one from herpes of the buttock, and finds that all five cross-immunize. His results indicate that the virus of herpes simplex is different from the virus of zoster. This opinion agrees with that of Roxburg who (*loc. cit.*) states that herpes simplex and herpes zoster are different diseases. Roxburg goes on to say that there does not now seem to be any reasonable doubt that herpes simplex is caused by a definite, ultra-microscopic virus which has been found in the sputum of patients with herpes and which may remain after the herpes has healed giving rise to recurrences. Furthermore such patients may act as carriers.

Bedson (*loc. cit.*) cites certain cases which, he believes, suggest that the fluid from the vesicles of certain bullous skin diseases, other than herpes and zoster, contain an organism belonging to the group of so-called filterable viruses which can be transferred to animals and produce lesions bearing a close resemblance to those produced by the viruses of herpes and of foot and mouth disease.

Bedson also states that the virus is always the same in the herpes vesicles accompanying such conditions as pneumonia, malaria and cerebrospinal meningitis and the vesicles of zoster after nerve lesions produced by the virus of anterior poliomyelitis, arsenic poisoning and injuries to the nerve cells of the posterior root ganglion. From these facts he concludes that the viruses of herpes and of zoster are wide spreading, leading a saprophytic life in human tissues or are of the nature of autolytic enzymes which can be produced de novo by a variety of different agents causing cell injury.

Roxburg apparently feels that the theory of the identity of the zoster and variella virus does not satisfactorily explain all cases of zoster for he suggests that there may be a specific zoster virus apart from the variella virus. He thinks that there may be a large number of spontaneous cases of zoster which are due to the same virus as variella.

Perdrau, like Bedson and Roxburg, speaks of two strains. He calls the virus of herpes neurotropic and speaks of a lethargic strain and a virus which is dermatropic. He believes that these two strains are different species of the same virus which have fixed characteristics of their own. He agrees with Roxburg that there may be carriers whose saliva and nasal secretions contain the virus. Herpes simplex or febrilis, he concludes, is caused by a living agent or virus which lives normally a semisaprophytic existence on the mucous surfaces of most persons. It is mildly pathogenic to man and probably responsible for at least some cases of zoster by local invasion of the central nervous system. A different strain of the virus of herpes, pathogenic to man, is, he believes the causative agent of epidemic encephalitis.

Tessier, Gastinel and Reilly (*J. de physiol. et de path. gen.* 24: 271, 301 and 316, 1926) have demonstrated that the virus of a herpes vesicle can be inoculated and can reproduce the disease thus completing the chain of evidence. Tests with the human virus were made on 400 persons in the last three years. They proved the constant presence of virus in the herpes vesicle; the susceptibility of man to the virus of an active lesion, even when there was no history of spontaneous eruptions; the inoculability of lesions in series on the same or another subject; and the importance of predisposing and pathologic factors. As a rule neither local nor general immunity was conferred. The virus applied to the skin works rapidly into the depths as is evidenced by the prompt inflammatory reaction disclosed in the tissues beneath.

ANOTHER FATAL "FACE PEEL"

The following notice was published in the *Archives of Dermatology and Syphilis* XIV: 6, 1927.

The coroner's jury held that the death of Mrs. Louise Wulbers, San Francisco, September 9, was the result of shock, excitement and absorption of carbolic acid while undergoing a "knifeless facial operation" at the hands of "Dr." Zailiek Saltzman. This office has no record of a doctor of medicine by that name. The California State Board of Medical Examiners notes that Mrs. Wulbers died suddenly following the application of phenol solution to her face; also that the records of the board show that several deaths have been reported as due to the absorption of phenol applied by so-called beauty specialists during the operation known as "face peel."

A NEW GERMICIDE

A liquid germicide, known as S. T. 37, that destroys bacteria so quickly that the time in which the reaction occurs can not be accurately measured, has been developed by Dr. Veader Leonard, assisted by Dr. William A. Feirer, of the Johns Hopkins School of Hygiene and Public Health.

The new germicide has the selective capacity of killing the most resistant bacteria in fifteen seconds without injuring the most delicate tissues. The active agent responsible for this extraordinary germicidal power is hexylresorcinol, a synthetic chemical harmless to man but possessing over 70 times the germ-killing power of pure carbolic acid.

Hexylresorcinol was first developed in the Hopkins laboratories about three years ago. Since that time it has come into general use by the medical profession both here and abroad as an internal antiseptic. Dr. Leonard has continued his search, however, to find a way of "harnessing" his new compound so that it could be put to use as a general antiseptic.

After many experiments a solvent consisting of glycerine diluted with water was found that seems to answer all practical purposes. Dr. Leonard's research has thrown a great deal of light on the explanation of the great speed and efficiency of the hexylresorcinol's germicidal action.

"All fluids," he explained, "are endowed with a physical property known as 'surface tension.' This cohesive force, which can be measured accurately in

tiny units known as dynes, is the force which makes a fluid like pure water draw itself up into small separate drops on surfaces such as a window pane, instead of flowing out over the surface of the glass in a thin film. Pure water has a very high surface tension—namely, 77 dynes, and for this reason will not penetrate into tiny spaces into which fluids of low surface tension will readily flow. Now hexylresorcinol is so incorporated in solution S. T. 37 that the lowest possible surface tension is maintained—it amounts to only 37 dynes—a fact from which the name S. T. 37 is derived. Being largely freed of this 'self-contracting' force, the solution is very penetrating. This allows the solution to come into contact with germs which may be lurking in the depths of tiny microscopic crevices—and which would otherwise escape destruction.

"Contact with the bacteria having been made, by means of this penetrating property, the same factor, low surface tension, now operates in two ways to speed up the destruction of the germ. In the first place, chemicals like hexylresorcinol, which lower the surface tension of their solutions very powerfully are known to concentrate themselves very rapidly on the surface of any tiny non-crystalline particles with which the solution comes in contact. This phenomenon is known to the physicists as mechanical adsorption and hexylresorcinol shows it in high degree. Now it so happens that germs are non-crystalline particles and when brought in contact with S. T. 37 the hexylresorcinol immediately becomes concentrated on the surface of these germs. The agent which destroys them actually seeks them out and 'pounces' on them, so to speak."—*Science*, November 18, 1927.

AMERICAN COLLEGE OF PHYSICAL THERAPY AND INTERNATIONAL LEAGUE AGAINST EPILEPSY AS WELL AS THE AMERICAN PSYCHIATRIC ASSOCIATION TO VISIT EUROPEAN MEDICAL CENTERS

An opportunity to enlarge our knowledge of special branches of the profession is offered by visits to the European centers which have been arranged by the American College of Physical Therapy and the International League Against Epilepsy.

The purpose of these visits is to obtain by personal contact a comprehensive idea of what is taking place across the water and these Societies cordially extend to the entire medical profession an invitation to participate.

Perhaps the largest party to go abroad will be the American College of Physical Therapy. This group will sail from New York on May 26, 1928. The Epileptologists and Psychiatrists will precede them, sailing on March 17.

While in Europe Psychiatrists will visit several of the leading clinics, including the famous "Bethel Colony of Epileptics," in Bielefeld, Germany. At various stages of their journey clinical discussions will be held. At these meetings leading specialists in psychiatry will address them.

The high point of Physical Therapy tour will be the visit to Prof. Rollier's famous hospital in Leysin, Switzerland. This is the most famous clinic of its kind in the world, and where Dr. Rollier conducted his first experiments with heliotherapy.

THE PREVALENCE OF DIPHTHERIA

Reports received from all parts of the United States indicate that the disease is becoming more prevalent this year. It may be that this is the beginning of a new wave. Whether or not immunization has been applied throughout the United States to a degree that may be sufficient to lower the rising trend of the disease is not known. The more extended application of immunization is bound, if continued consistently, to reduce the morbidity from diphtheria greatly.—*U. S. Daily*.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 13491
DYSPNEA AND EPIGASTRIC PAIN
MEDICAL DEPARTMENT

An American meat cutter of sixty-three entered the hospital July 26 complaining of weakness and shortness of breath.

Three years before admission he began to be dyspneic on moderate exertion. At the same time he put on much flesh, especially about his abdomen and chest. His weight reached 240 pounds. He began to feel weak and had great difficulty in getting about. One day while at work he had a severe attack of dyspnea, grew rapidly weak and "felt as if his heart were leaving his chest." He fainted and was unconscious for about three minutes. A physician told him that he had water about his heart. He remained in bed for six weeks, taking nothing but salts and water. He lost about 30 pounds, felt much better and was able to work again, but was always dyspneic and had edema of the legs from the thighs down, disappearing overnight. By dieting he kept his weight at about 235, with some gain during the past year. He could work only about five hours at a time and had grown increasingly weak and dyspneic. He also had attacks of orthopnea. On the whole however he was fairly comfortable until five months before admission, when he had another attack of severe dyspnea and became "water-logged", especially about the waist and chest. He was in bed under medical treatment for five weeks. Then he gradually got up, but was never able to return to his work. From that time to the present he had had to take periods of rest in bed of two or three days at a time with intervals of one or two days of being up. During the past five months his weight had fallen from 240 to 180 pounds. Within the past three months his dyspnea had caused great distress at night, so that he was sometimes obliged to sit up for two or three hours. Three weeks before admission he began to have severe cramps in the abdomen immediately after eating, accompanied by griping pains which doubled him up at times. With them he felt nauseated. Since the onset of these his dyspnea had troubled him less except with exertion. Two days before admission he had an attack after taking a cupful of malted milk, relieved by soda and a hot water bottle.

Since the onset of the cramps he had lived mainly on ice cream and ginger ale, which did not bring them on.

His mother died of shock. In twenty-four years of marriage his wife had never been pregnant.

The patient had typhoid at ten years. He was hit on the back of his head with an axe at twelve. Twenty-five years before admission he had pneumonia. For twenty years he had had slight dyspnea on overexertion. For the past fifteen years he had had rheumatism, affecting chiefly his right leg, so that for ten years he had walked with a cane. He had always worked and felt quite strong until the onset of the present illness. Ten years before admission he had periods of dysuria lasting three or four days with remissions of weeks or months. There was dribbling and some retention. After the removal of a growth in the urethra he had no more of this trouble. For the past five years he had urinated two or three times at night. For three years he had had a suggestion of right inguinal hernia.

Clinical examination showed an obese man lying propped up in bed in no acute respiratory distress. The nasal septum was deviated. There was dullness with râles at the base of the right lung posteriorly. The apex impulse of the heart was not found. The borders of percussion dullness were as shown in Figure 1. There was slow

fibrillation. A systolic murmur was heard at the apex. The sounds were of poor quality. The artery walls were thickened according to one examiner, normal according to another. The blood pressure was 155/90. An electro-cardiogram July 27 showed auricular fibrillation, rate 60 to 70, right bundle branch block and low potential. Another August 3 showed auricular fibrillation, rate 120, runs of ectopic ventricular beats,—intra-ventricular block. The abdomen was normal except for loose femoral rings, especially on the right. Rectal examination, extremities and reflexes normal. Pupils unequal, with sluggish reactions. Arcus senilis.

Urine normal in amount, specific gravity 1.030, cloudy and alkaline at the single examination, no albumin or sugar, sediment negative. Renal function 50 per cent. Blood: leucocytes 8,750 at entrance, 45,000 August 3, polynuclears 67 per cent., eosinophils 5 per cent., hemoglobin 90 per cent., reds 4,900,000. Smear normal. Wassermann negative. Non-protein nitrogen 26

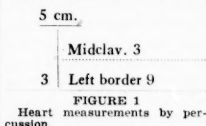


FIGURE 1
Heart measurements by percussion.

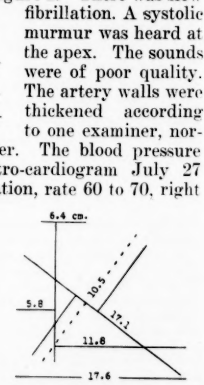


FIGURE 2
Heart measurements by X-ray.

milligrams. Uric acid 6.7 milligrams. Creatinin 1.5 to 2.4. Stools: guaiac positive at one of two examinations.

X-ray examination showed the heart shadow markedly enlarged in its transverse diameter (see Figure 2). Both the right and left ventricles were prominent. The supracardiac area was normal.

July 27 there were a few râles at the left base, more at the right. The patient could not sit up because of pain in the right hip. This pain improved under salicylates and cinchophen. August 1 nodules thought to be tophi were removed from the right ear. Histological examination confirmed this diagnosis.

August 2 the patient had an attack of the severe epigastric cramps for which he entered. At first they were relieved by nitroglycerine, but by night that and amyl nitrite were both ineffectual. Two doses of a quarter grain of morphia were required to control the pain temporarily. He was unable to retain anything in his stomach. The next day he looked very ill. The apex rate was 107. The radial pulse and the blood pressure were not obtainable. Over the precordium was a loud pericardial friction rub. The heart was not enlarged. Before an emergency portable X-ray could be taken the patient died.

DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

1. "He felt as if his heart were leaving his chest." One always speculates about remarks like this. If a person feels as if he were out automobiling it is because he has been out automobiling before and knows what it feels like. But how a man can know and recognize this I don't know. I suppose what we have to say is, it is something like a sense of outward pressure such as we can imagine a person might have who has an aneurysm, or such as a person has when his stomach is very much distended. Anyone who takes histories much will be struck with the wonderful statements of this kind that people make, for instance, "a headache that feels like meningitis." If you ask, "Have you ever had meningitis?" the answer of course is "No".

2. The striking thing is that he fainted often.

3. It is perfectly conceivable, of course, that he did have an acute pericarditis.

4. I think he probably had some other nutriment besides salts and water. That is his impression, we may say.

5. Looking back on his attack I do not see that we can say anything except that it was a cardiac attack, an attack of cardiac failure such as we get in acute and chronic heart disease of any type and all types. We cannot identify it with any particular disease like angina pectoris or cardiac infarct. It does not seem like edema

of the lungs. And it seems as if there must have been a great deal of pain or he would not have fainted. We may still find in the later history events pointing to angina or to a cardiac infarct.

6. "He became water-logged, especially about the waist and chest," does not sound very probable to me. Usually it is the feet first.

7. I do not know how to explain the fact that his dyspnea troubles him less at the end. With his weight slight dyspnea on exertion does not mean anything.

8. A malum coxae senile would be the commonest condition in his leg,—a bony overgrowth in the hip joint; but it may be a similar process down in the knee, or some other disease. At any rate it would have no bearing on the present illness. It is not the sort of trouble that has any relation to the heart.

9. One wonders whether the "growth in the urethra" was the prostate.

10. We get nothing of importance, that I see, out of the past history, but the present illness of the last five years is clearly the history of a cardiac disease. Beginning at fifty-eight one would naturally suppose that it was of the hypertensive type rather than the syphilitic or rheumatic.

NOTES ON THE PHYSICAL EXAMINATION

1. The transverse diameter of the cardiac shadow is the only figure that interests us much. Certainly it shows an enlarged heart, which would go with the type of disease I have been guessing that he had.

2. The question we have to ask about this blood pressure, as we so often do, is, has it been higher previously? In a great many cases we can follow the onset of high blood pressure through a stage in which it is up part of the time and down part of the time to the stage when it becomes permanently elevated, and then to a third stage when, as the heart begins to fail, the pressure sinks. This record would correspond well enough with the last stage of that process.

3. At his age we do not make much of the unequal, sluggish pupils.

4. We have nothing to say against his kidneys, though the uric acid is rather high.

5. The X-ray shows to my eye nothing but the evidence we have already had of a heart enlarged in all chambers.

6. Here we have a real case of gout, of which we do not see much nowadays. That has no bearing that I know of upon the heart or upon any other organ. It used to be the fashion, especially in England, to speak of gouty kidneys, gouty heart, gouty affections of the stomach even. But I do not think anybody now supposes that gout lives anywhere except at the periphery, where the tophi are.

7. The pericardial rub is of course very important if true, and almost gives us our diagnosis.

DIFFERENTIAL DIAGNOSIS

As soon as we read, early in the history, that he had these epigastric cramps we began wondering whether this might be a case of infarction, which gives epigastric pain often mistaken for various abdominal lesions like appendicitis, often operated for that, when it really is the heart.

Then that bundle block supports that idea, although we can and do have it often without gross lesions of the myocardium.

Finally, we have this return of epigastric pain with pulse failure, with leucocytosis (45,000) and acute pericarditis. Cardiac infarction usually brings about an acute pericarditis with it. Therefore that is the first thing naturally to come into our minds, but we must remember the other possibility, which is acute pericarditis not connected in any way with a cardiac infarction. On the whole I lean towards the infarct, though I think it is not sure.

So I think Dr. Mallory will find a hypertrophied and dilated heart, with some arteriosclerosis, without valve lesions of any importance, with myocardial changes, probably of the type I have just been discussing, depending on infarcts new and old. Infarct histories are much longer than we used to think. We used to think of them as always an acute terminal event. We know now that the process goes on months and years, with recurrent attacks.

I do not believe he has a duodenal ulcer, though there was a time when Moynihan used to speak of the arteriosclerotic type of peptic ulcer. This man has not had enough symptoms, it seems to me, or other evidence pointing to peptic ulcer for me to say that. I believe his kidneys will be all right, and the rest of the post-mortem will show only passive congestion.

Of course if he had cardiac infarct there is a good chance that he had a ventricular clot at that spot, and bits might get washed off, but we have no evidence of that. I should not be surprised, however, if infarcts turned up in the spleen, liver, or kidneys.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Arteriosclerotic heart disease.
Auricular fibrillation.
Coronary occlusion.

DR. RICHARD C. CABOT'S DIAGNOSIS

Cardiac infarction.
Acute pericarditis.
Hypertrophy and dilatation of the heart.
Arteriosclerosis.
Infarcts in the spleen and liver?
Chronic passive congestion.

ANATOMIC DIAGNOSES

1. *Primary fatal lesion.*
Hypertrophy and dilatation of the heart.
2. *Secondary or terminal lesion.*
Chronic passive congestion.

3. *Historical landmarks.*

Infarcts of spleen and kidneys.
Cholelithiasis.
Chronic cholecystitis.
Hyperplasia of prostate.

DR. TRACY B. MALLORY: We were not able to find any cardiac infarction or any occlusion of the coronary arteries in this case. It is possible that there may have been an acute terminal occlusion, a thrombosis which we failed to find. I believe we sometimes do miss those. On the other hand it cannot have been of long enough duration to have caused an infarct. There certainly was nothing in the pericardium to explain the rub that was heard. All that we could find were a few very small areas of leucocytic infiltration in the muscle of the intraventricular septum, which perhaps connects up fairly well with the abnormal electrocardiographic findings.

DR. CABOT: How much did the heart weigh?

DR. MALLORY: 584 grams,—much hypertrophied. The other organs of course showed chronic passive congestion. There were infarcts in the spleen and kidney, and the gall-bladder showed a chronic cholecystitis and was filled with about fifty faceted stones, which possibly may have caused some of his epigastric symptoms.

DR. H. B. SPRAGUE: It is worth noting the fact that at least as early as the latter part of the last century Marie pointed out in his treatise on infarction of the heart that one could not draw conclusions about the more delicate thrombi that might be in coronaries unless they were opened in serial sections; that opening in the longitudinal axis with scissors one was very apt to dislodge the fine clot. This may explain some of these cases in which we have perfectly good clinical evidence, all that we can ever get, to make a diagnosis of coronary occlusion, but in which it is not found at necropsy. The same thing has been pointed out recently by Benson and Hunter, who have, I think, the largest series in this country of cardiac occlusion cases, largely coroners' cases. That article was published in *Northwest Medicine* 24: 606, 1925.

DR. CABOT: It is not at all unusual in our records here to have pericardial friction rubs supposedly recognized during life and nothing there post mortem to show for them. I do not know any organ in the body in which we have seen so many mistakes of omission and of commission in our experience here as the pericardium. We miss pericarditis when it is there and find it when it is not there more often than any other mistake that we make.

CASE 13492

A GRAVE ABDOMINAL CONDITION; INTESTINAL RESECTION; RECOVERY

SURGICAL DEPARTMENT

First admission. An Italian-American printer thirty years old came to the Emergency Ward

March 26 complaining of pain in the abdomen.

The pain had been cramp-like, chiefly in the lower abdomen and worst in the umbilical region, and had gradually increased in severity since the onset, three days previously. The day of admission he began to vomit. The morning of admission the vomitus was coffee grounds. He had previously had occasional transient pain in the lower abdomen not related to meals. His bowels had not moved since March 23. He had had three enemas the day of admission with no result. The night of admission the pain was almost unbearable.

Clinical examination showed a well nourished young man curled up in bed, apparently in extreme abdominal pain and collapse. Skin and mucous membranes dry. Lungs clear. Apex impulse of the heart not found. Percussion borders not made out. Heart displaced upward by abdominal distention. Sounds weak, indistinct and of poor quality. No murmurs. Blood pressure 128/58 to 168/62. Board-like rigidity of the abdominal wall. Abdomen tympanitic practically all over. Liver dullness almost entirely obliterated. No masses. Extreme tenderness throughout, apparently a little more intense over the right lower quadrant. Genitals, rectal examination, pupils and reflexes normal. Extremities negative except for slight arterial pulsation in the left arm.

Before operation urine negative except for a trace of sugar, leucocytes 25,000, temperature 101°, respirations normal. General condition very poor. Operation was undertaken as a desperate hope.

Shortly after admission operation was done. The patient was in profound shock after it. He was given saline intravenously in the amphitheater and glucose subcutaneously with insulin. A culture from the abdominal cavity showed no growth. The blood sugar was 220 to 133 milligrams, the non-protein nitrogen 39 milligrams. He did very well. He was given orange juice, tea and gruel and by the first of April was put on a soft solid diet. The tube was removed from the proximal loop because it had become clogged. The distal loop drained large quantities of clear odorless fluid. The distention was relieved by the removal of the tube. The bowels moved well. April 3 the skin stitches were removed. The wound had been protected with kaolin and glycerine, but there seemed to be no tendency to digest the skin. April 4 there was sepsis in the wound. A half-length was inserted into the upper end of the wound, allowing the escape of a large amount of pus. The cavity ran nearly the whole length of the wound. A wick was inserted here. One of the cigarette wicks was removed. The sepsis seemed to be adequately drained. There was a large amount of intestinal secretion from the distal loop. April 20 he was discharged for three or four weeks' convalescence before further operation.

History of interval. After leaving the hos-

pital he did well. The ileostomy functioned well. The bowel movements were mushy and normal in character. A week after his discharge he had one formed stool by rectum. After this he frequently had a desire to move the lower bowel but passed only gas. A week before his readmission the opening of the lower bowel in the wound became closed. He had eaten practically everything he wanted with good appetite and had grown steadily stronger. The dressing had been changed regularly every three hours.

Second admission. May 21 he returned for further operation.

Clinical examination. Tonsils pitted and septic appearing. A slight systolic murmur at the apex. The ileostomy in the right abdomen was functioning well. It would not admit the little finger. The upper part of the wound was healed. The distal end of the gut was not evident.

Before operation urine and blood not recorded, temperature and respirations normal, pulse 74 to 98. After operation the urine showed no sugar on three examinations.

May 23 operation was done. The patient did surprisingly well after it. He was allowed only a little fluid by mouth. The abdomen was soft and only slightly distended. May 26 there was fecal drainage around the catheter. The patient was now on fluids. The wound was in good condition. By May 31 he was on a soft solid diet. The catheter, the wick and the stitches were all out. There was considerable drainage of feces through the wound but also an occasional small movement by rectum. The general condition was very good. After he was given enemas twice daily there was only a little fecal discharge from the wound. There was a small amount of pus in the old drainage wound, which had broken open. During the next nine days he did very well. The wound practically closed, with very little discharge coming through. Kaolin was used about it. June 16 he was discharged.

History of interval. After leaving the hospital his convalescence was satisfactory. He had natural bowel movements and only very small amounts of discharge from the fistula until the middle of August. Then he felt nauseated and vomited and the fistula drained continuously for eleven hours. The drainage decreased in amount, but after this he had no natural bowel movement. He did not feel particularly ill, although his head ached. A daily enema came out through the fistula or returned, but brought no fecal material. Laxatives had no effect on natural movements, but increased the drainage.

Third admission, September 6, three months after his last discharge.

Clinical examination showed the heart sounds of fair quality, a systolic murmur, the aortic second sound accentuated. Blood pressure 110/80. Urine not remarkable. Blood not recorded.

X-ray examination. A barium enema passed to the cecum without delay. It was impossible to fill the ileum. This however might not be

abnormal. Examination with a barium meal showed the colon filled with barium. There was a small amount of barium in the terminal ileum. The stomach was empty at the end of six hours. Very little could be made of this case. Thorough cleaning out of the gastro-intestinal tract was advised before injection of barium into the fistula under fluoroscopic observation. An attempt four days later was unsuccessful because the transverse and descending colon still contained a considerable amount of barium. Preparation with several high enemata was advised. Five days later reexamination with a motor meal showed the stomach half empty at the end of six hours. The head of the barium column was in the jejunum. At six hours the terminal ileum was shown to be filled. The cecum was well filled out and appeared to be normal. At twenty-four hours practically the entire meal was in the colon. The head of the column was well past the splenic flexure. Up to this time no barium had appeared on the dressing, although there was considerable fecal material coming out. The barium did not come through the fistula until about thirty-six hours after the administration of the meal. As far as could be determined there was no barium at the ileocecal junction. Motility as far as the colon was essentially normal. "The exact termination of the sinus can be demonstrated only by injection after the bowel is thoroughly cleaned of opaque material."

September 18 the patient was discharged.

At a visit to the Out-Patient Department September 30 the patient said that more fees than ever were passing by rectum.

DISCUSSION

BY TORR W. HARMER, M.D.

Whenever I enter a chamber of this kind, a chamber such as was frequented by Marie François Bichat, John Hunter, Astley Paston Cooper, it is with a feeling of awe and reverence. This afternoon this feeling is especially intense, for we shall see living, so omnipotent is the hand of Providence, one who might well have been on this table.

I do not know what is meant by the note about "slight arterial pulsation in the left arm" unless it means that they could feel his pulse at that site. His pulse was very feeble. His respirations were regular but increased in rate.

We can see the meagre history and the clinical findings presented features which were consistent with either intestinal obstruction or peritonitis. The fact that this was the third day of the attack and vomiting was just occurring now was not inconsistent with obstruction. The fact that he had previous attacks in the lower abdomen is consistent with partial obstructions in the past, or with a low-grade inflammatory condition in the past which may now have developed into an emergency. The fact that he was a

printer might make us think that these previous attacks were perhaps associated with lead, but certainly his present condition was not of lead. He was critically ill. The fact that his pain was cramp-like is consistent with either obstruction or peritonitis. The fact that the pains were so severe is perhaps more suggestive of obstruction. The distention of his abdomen is consistent with either diagnosis. The board-like rigidity of the abdominal wall, however, points of course to peritonitis. A point not mentioned here and very important, I think, is that auscultation over the abdomen showed no sounds throughout his entire right side, but there were a few gurgling sounds on the left side. The absence of sounds on the right is suggestive of acute peritonitis. The gurgling on the left suggests some peristalsis, and might be consistent with obstruction. The leucocytosis of 25,000 is consistent with either diagnosis, but associated with a temperature of 101° makes us think more of the peritonitis. Of course we cannot exclude an obstruction which has gone to such a stage that perforation has occurred with peritonitis secondary, that is, a complication of a primary obstruction.

The condition was desperate, and if the diagnosis had been certainly enough peritonitis it would have been a case where one might properly have carried out the treatment of Ochsner, that is, with the patient elevated, nothing by mouth, plenty of morphia, and fluids subpectorally or by rectum, glucose or salt solution. But there was a very strong possibility that there might be an obstructive lesion. If that were the case, immediate operation was demanded despite the condition of the patient. This was undertaken.

The pre-operative diagnosis then was a peritonitis, and possibly intestinal obstruction.

PRE-OPERATIVE DIAGNOSIS MARCH 26

Diffuse peritonitis.
Intestinal obstruction?

OPERATION, FIRST ADMISSION

Ether. Nine inch right rectus incision near the umbilicus. The peritoneum was opened with escape of foul odor and turbid flaky fluid. Immediately there were brought into view two tremendously distended gangrenous coils of gut which paralleled one another in the right side of the abdomen from the pelvis to the right upper quadrant and then crossed the epigastrium. The bowel was about three inches in diameter and extremely fragile. The loop was accordingly drained through a trocar. The collapsed bowel was then seen to pass into a pouch apparently at the lower end of the mesentery. The uncollapsed bowel beyond the gangrenous portion could not be delivered. As the patient's condition was very critical the gangrenous bowel, something over two feet in length, was clamped and excised and a large rubber tube sewed into each remaining end. Two long cigarette drains

were placed in the pelvis. The abdomen was closed in layers. Intravenous salt solution was given on the table. The patient was returned to the ward in poor condition.

FURTHER DISCUSSION

The history states that the abdomen was generally rigid but that the greatest amount of tenderness was in the lower abdomen a little to the right of the midline. Therefore my incision was to the right side. The patient was in such extreme condition that nothing was left to do but bring the two ends out through the abdominal wound. Anastomosis was out of the question. The man was practically pulseless at the conclusion of even this short operation, but he rallied well with intravenous and subpectoral salt solution.

The diagnosis was not made before the operation. We made a diagnosis of peritonitis and we found peritonitis. We had in the back of our heads obstruction and we found obstruction, but we could not say what kind of obstruction. It turned out to be an unusual condition. There was a defect in the lower part of the root of the mesentery through which the bowel became strangulated. This resected bowel at the end of the operation, in its shrunken state with the mesentery attached, measured twenty-seven inches, but *in situ* it was fully three feet.

It was then a developmental defect in the mesentery. The previous pains had been probably of partial obstruction, little loops getting caught and becoming disengaged, until finally this huge amount of bowel was caught.

We had a patient fortunately who rallied well. We had taken out we will say roughly three feet of small intestine, and that small intestine was apparently ileum. Was such an amount of intestine excised consistent with life? It is consistent with life. The small bowel, we may remember, varies greatly in length. Treves has found that it varies anywhere, in a great number of subjects, from fifteen and a half feet to thirty-one feet ten inches, an extreme variation. Moynihan* in reviewing the literature on resections of the small bowel found that apparently half of the small intestine could be removed and tolerated in human beings. Much larger amounts of small intestine have been removed. He collected fifty-four cases in which between 192 and 500 centimeters of small bowel had been removed. The point is not how much is removed but how much is left, and with the great variation in length of course we cannot tell in an emergency operation. There was however nothing else to do in this particular instance. Providence smiled on the boy and he recovered. The discharges were profuse through the abdominal wound. Infection ensued and cleared up well before his discharge. The secretion at no time digested

the wound, which was of course what we might expect in a low bowel fistula.

He was discharged something over three weeks later and sent to a convalescent home. He returned a month later so healthy that it was hard to believe it was the same boy. But he still had a fistula through which all his fecal contents were coming. The problem then was to close this discharging wound.

In closing it were we to try to anastomose the proximal and distal ends of the bowel, or were we to be content with a simpler procedure, anastomosing the proximal end to the cecum? The operation was very difficult on account of the tremendous amount of adhesions. Finally an end-to-end anastomosis was done without clamps, in the depth of the abdomen. We introduced a catheter into the bowel above the anastomosis so as to give a vent for gas and lessen the strain on the stitches. This I think saved the situation.

PRE-OPERATIVE DIAGNOSIS, MAY 23

Ileostomy secondary to previous resection.

SECOND OPERATION

Gas-ether. Circular incision around stoma. Skin closed over stoma with running suture. Old abdominal scar then excised. Abdomen opened. The whole quadrant was a mass of firm adhesions, the bowel being held in distorted curves and the appendix itself reaching across and partly wrapped around the base of the ileostomy. These adhesions were separated with great care. Both proximal and distal ends were then partially resected to insure a better anastomosis. It was impossible to deliver the ends into the wound without a great deal further separation of adhesions. This did not seem wise. Enough bowel did not remain to use clamps; therefore an end-to-end anastomosis was done in the bottom of the wound without clamps, using number 0 continuous catgut for inner stitch and Pagenstecher for outer stitch. Wound reinforced with omentum. A small catheter was placed in the proximal loop after the Witzel method. A cigarette drain was placed nearby. Wound closed in layers.

PATHOLOGICAL REPORT

An appendix 8 centimeters in length. The surface is moderately injected and covered with torn adhesions. The walls are thickened and edematous. The lumen is patent. There are many small ulcerations of the mucosa. Acute appendicitis.

FURTHER DISCUSSION

The marked pathological condition of the appendix as shown by the report was a surprise. The appendix formed part of the great inflammatory mass of adhesions all through this region and was actually wrapped about the base of the ileostomy.

*B. G. A. Moynihan, *Abdominal Operations*, fourth edition, 1926, Vol. I, pages 549 to 556.

He went along for a number of days, then discharged some feces through the abdominal wound, but he also had a movement by the natural route the same day.

That is about all of the story. Dr. Maurice Richardson told me twenty years ago that practically every case of fecal fistula following an appendix would heal if it was let alone, even six, nine, twelve months. Here was a fistula in the region of the terminal ileum, and having seen many appendix cases follow out the words of Dr. Richardson, I decided to wait here. The man was discharged from the hospital with a fistula which was discharging somewhat, but with most of the feces passing by the natural route.

This continued with a diminished amount of discharge through the wound up to about the middle of August. Then the man developed an acute diarrhea and everything came out through the fistula, which enlarged in size. From that time until the readmission nothing came out below.

At the third admission first an enema was given below and some escaped through the fistula. Then it was followed by a barium meal by mouth. Some came out through the fistula, but there was still some in the large bowel; it was impossible to tell how much was left. Finally another meal was given by mouth and practically everything was seen by fluoroscopy to come through into the large bowel. The barium did not come through the fistula until thirty-six hours after the meal.

He was discharged then from the hospital for further observation in the Out-Patient Department. He says now, November 3, that there is just a little moisture through the fistula, and everything is coming out the other way.

(Examination of the patient.)

DR. CABOT: Did you try to do anything about the mesenteric hole?

DR. HARMER: We could not do anything about it, and I imagine by this time it is sealed off by adhesions.

DR. CABOT: Do you have natural movements of the bowels?

THE PATIENT: Yes.

DR. HARMER: Cases in which not more than one half of the small gut is removed have quite natural bowel movements. When very large resections have been done, diarrhea is a common sequel. Fats are not well tolerated. Proteins are largely lost, but carbohydrates are better digested.

Some years ago J. Marshall Flint* made a valuable survey of the literature on bowel resections.

This boy is in excellent flesh. The wound is solidly healed. There is a tiny opening below the middle which will just admit a probe. The

few drops of moisture on the dressing are not now fecal, but are the yellow granulation discharge of a sinus.

CLINICAL DIAGNOSIS

First Admission

Internal abdominal hernia with strangulation.
General peritonitis.

Second Admission

Ileostomy following resection for acute intestinal obstruction.
Acute appendicitis.

Third Admission

Fecal fistula.

NEW IDEAS GET MAIN SUPPORT OF FOUNDATIONS

In describing the use the great American philanthropic foundations were making of the immense funds at their disposal Frederick P. Keppel, president of the Carnegie Corporation, said at "The Better Times" dinner at the Pennsylvania Hotel recently that their millions were being devoted less and less to institutions and more and more to individuals and groups with ideas which can be pushed forward by team play.

As an illustration Mr. Keppel revealed that scientists have been working at San Francisco to discover the nature and cure of pyorrhea, a disease, he adds, with which 80 per cent. of the citizenry have had or will have an acquaintance. The work is being supported by the Carnegie Foundation.

BILLION FOR "GOOD WORKS"

Mr. Keppel revealed that the total capital of the American foundations was, roughly, \$600,000,000, and the income therefrom \$30,000,000. Individuals, however, he said gave more than \$1,000,000,000 annually "for good works voluntarily." "I don't know if anyone has ever reckoned how much of our Federal and State and town taxes go into these same good works in addition," he added, "but I know that last year California raised \$5,670,000 for its State university alone. Compare this figure with the total revenue of our republic for its first year, which was \$4,600,000."

Mr. Keppel said that if the foundations distributed their funds among all the sound institutions, nothing worth while would happen. "It would be like the hypothetical distribution of Mr. Rockefeller's fortune," he explained, "among the people of the United States." The foundation should not contribute a penny that may be had elsewhere. In choosing to back ideas the foundations must support only those groups with the brains and energy to carry forward the idea chosen, the support to be extended only through the preliminary stages of fact finding, experiment and distribution, he said, assuming no responsibility to go beyond that point.

MORE ENDOWMENTS URGED

Closing with a plea for more endowments, Mr. Keppel said:

"There are more than 200 individuals in the United States who report taxable incomes of more than \$1,000,000. Most of them live in New York. Can't some of you show some of them the joys and privileges of contemporary immortality?"—*New York Herald Tribune*.

*J. Marshall Flint, *Johns Hopkins Hospital Bulletin*, 1912, Vol. 22, page 127.

THE BOSTON Medical and Surgical Journal

Established in 1888

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: \$6.00 per year in advance, postage paid for the United States; \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the Journal office, 126 Massachusetts Ave.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

SOME OF THE NEWER FUNCTIONS OF MEDICAL LIBRARIES

THE opening of the new library of the New York Academy of Medicine, last year, on the corner of Fifth Avenue and 103d Street, has served as an incentive for the librarian, Dr. Archibald Malloch, to inaugurate some unique functions in library administration and service. A separate bibliographical department was started through the original grant of the Rockefeller Foundation. At the request of a member it is now possible to obtain a list of references on any medical subject or a bibliography of all the writings of a particular man or group of men. Dr. Malloch thus distinctly encourages the writing of good books and good papers, although he wisely admits that "far too many medical articles and books are being penned," and that "a large number of them are vain and not needed." On the other hand, he believes that "every doctor has at least one patient every year whose case should be put on record in a brief note." This was the Osler method, a "brief note" on an unusual case or small series of cases, with an adequate but small bibliography. There is much to commend the method

and the bibliographical service offered by the library will aid the conscientious physician in his endeavors. The service also includes the verification of bibliographies already made, the completion of lost references, translations, the compilation of data and, perhaps most useful, the looking through of current periodicals for papers on special subjects upon which a member wishes to be kept posted. The making of abstracts is discouraged except under exceptional circumstances. The charges for ordinary service are extremely low, fifty to seventy-five cents an hour. Copies of bibliographies are kept on file at the library for future use.

Other services which the library is prepared to render include the photostating of books or cards from the catalogue and the publication of catalogues on special subjects, similar to the one already issued on "Medical Americana."

All of these features ought to be helpful to members and we wish they might be found in our own medical library in Boston. It is impossible to carry them out at present, in the Boston Medical Library, on account of the lack of grants of money for service and room to make that service possible. The most pressing need is for room; new stacks must be added to accommodate the rapidly growing numbers of books and additional members' rooms and service rooms are badly needed. Is not the splendid example set by our neighbors in New York the proper stimulus for a generous Boston donor, or group of donors to come forward to help one of the greatest assets to scientific modern medicine which the physicians of New England have, The Boston Medical Library?

INFANTILE SCURVY

SCURVY is a disease not peculiar to any age group, yet, with the exception of adults undergoing rigorous hardships and deprivations, the disease is seen now only in the very young. This is probably due to the ability of the adult to satisfy his appetite; to go out and get food substances which he craves. The infant, on the other hand, has little choice in the selection of his diet although nature has provided for him a most satisfactory food,—which is often, and unfortunately with insufficient reason, withheld. Large numbers of these small individuals are then left to be fed, according to the judgment of others.

When infants were fed unpasteurized and unboiled cow's milk, scurvy was not common, but infections due to milk borne organisms exacted a tremendous toll. So, quite rightly, health authorities concentrated their efforts toward a safe milk supply. The milk borne infections diminished but scurvy appeared among the infant population. Orange juice and other fresh fruit juices could supply antiscorbutic substances, so rather than run the risk of giving raw milk to infants,

the majority of physicians endorsed the policy of giving the infant boiled or pasteurized milk, supplying the vitamin deficiency with orange juice. A few still believe that this added antiscorbutic is not completely satisfactory and that certified raw milk is the best food for the baby. Some have failed to grasp the situation and give either raw milk, often not of especially good grade, thereby exposing the infant to milk borne infection, or boiled milk without supplying the antiscorbutic factor.

Dr. C. F. McKhann has made a summary of the cases of scurvy seen at the Children's and Infants' Hospitals of Boston from January 1, 1924, to October 1, 1927. Surprisingly there have been over 150 cases in that time, all clinically typical of scurvy, all responding rapidly to the therapeutic use of orange juice, and 110 verified by Roentgenograms. There were 40 other cases with a diagnosis of scurvy which were seen only once. Roentgenograms were not made and the failure of a second visit precluded determination of the effect of therapy, so these cases have not been included in this survey.

Several patients came to the hospital of their parents' volition, and many were referred by their physicians, some to the Orthopedic department with the diagnosis of fracture or of osteomyelitis. The differential diagnosis between scurvy and osteomyelitis is not easy, especially when scurvy is not suspected.

McKhann found the annual incidence as follows:

1924	25
1925	46
1926	57
1927 to October 1	26
.....	154

Of more importance, however, was the distribution of cases in the city and surrounding country. The metropolitan district leading with 100 cases divided as follows:

Allston	2
Boston	7
East Boston	6
South Boston	4
Cambridge	15
Charlestown	4
Chelsea	5
Dorchester	12
Everett	5
Jamaica Plain	3
Roslindale	3
Roxbury	24
Somerville	10
.....	100

Other communities referring several cases were:

Medford	13
Winchester	
Woburn	
Marblehead	10
Lynn	
Peabody	
Revere	

Beverly	4
Gloucester	
Haverhill	4
Lawrence	
Lowell	4
Neponset	
Wollaston	4
Waltham	
Waverley	4
.....	

Winthrop and South Braintree, each sent two cases and Atlantic, Hudson, Natick, Marlboro, Maplewood, Readville, Springfield, Taunton, and West Dennis each sent one. Two patients came from New Hampshire.

The age incidence follows:

2-4 months	10 cases
5-6 "	14 "
7-8 "	52 "
9-10 "	46 "
11-12 "	22 "
12-18 "	9 "
18-24 "	1 "

This series includes only those cases seen at the Children's and Infants' Hospitals. Consequently figures mean little as regards relative incidence in the several communities. For example, it is quite natural that so many of the patients should come from Roxbury inasmuch as the hospitals are in Roxbury. Of the 154 cases, 120 came from greater Boston.

That one hospital should have among its patients 150 cases of scurvy in less than 4 years, is in itself surprising, but, also, in view of the widespread and increasing efforts toward preventive medicine and the large sums spent annually for education in matters of health, the occurrence of so many cases in the metropolitan district is disturbing.

Parental nationality was studied and seemed to have no bearing on the occurrence of the disease.

Both parents born in the United States	88
One parent born in United States	17
Both parents foreign born	31
Birthplace of parents undetermined	18

The countries of the origin of the foreign born parents were:

Canada and Newfoundland	15
Ireland	12
Russia	8
Italy	5
Greece	2
France, Norway, Portugal, Poland, Sweden, West Indies, each	1

Of the 88 pairs of native born parents the descent of 75 could be traced.

English, Scotch, Irish	62
German	7
French	3
Italian	2
Russian	1

Cases of infantile scurvy are thus seen to occur in the community in sufficient numbers to merit attention, inasmuch as the disease is preventable by simple means and is one which should be erad-

lated by education. We cannot explain the high incidence on the basis of foreign born non-English speaking parentage, because the majority of the parents were native born and were descended from English speaking people. It must be explained on faulty conception of the preparation of infants' diets. This does not mean that infants should be exposed to infections through the return to unboiled, unpasteurized milk but that the addition of antiscorbutic substances,—orange juice, tomato juice, or other fresh fruit and vegetable juices should be made to the diet of all artificially fed infants.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

HEYD, CHARLES GORDON. B.A., M.D. Buffalo Medical College 1909, F.A.C.S., Professor of Surgery at the New York Post-Graduate Medical School, Attending Surgeon at the New York Post-Graduate Hospital, Consulting Surgeon to the Greenwich Hospital, Greenwich, Connecticut and Morristown Memorial Hospital, Morristown, N. J. His subject is: "The Use of Iodine in Thyroid Disease." Page 1075. Address: 116 E. 53rd St., New York, N. Y.

YOUNG, EDWARD L., JR. A.B., M.D. Harvard Medical School 1909, F.A.C.S., Assistant Visiting Surgeon to the Massachusetts General Hospital. His subject is: "Colloid Carcinoma of the Bladder." Page 1079. Address: 279 Clarendon St., Boston.

GREGG, DONALD. A.B., M.D. Harvard Medical School 1907, Superintendent of Channing Sanitarium, Wellesley. His subject is: "The Diagnostic and Prognostic Value in Psychiatry." Page 1082. Address: 113 Wellesley Ave., Wellesley.

BEARSE, CARL. M.D. Tufts College Medical School, 1915, and Army Medical School, Washington, D. C., 1918, Assistant Visiting Surgeon at the Beth Israel Hospital. His subject is: "Necrosis of Terminal Phalanx of Finger." Page 1083. Address: 483 Beacon St., Boston.

TOWLE, HARVEY P. A.B., M.D. Harvard Medical School 1892, Dermatologist at the Massachusetts General Hospital, Formerly Professor at Dartmouth and Ex-President of the American Dermatology Association. His subject is "Progress in Dermatology." Page 1086. Address: 453 Marlboro St., Boston.

The Massachusetts Medical Society

ANNUAL DIRECTORY OF 1928

The Directory of the Officers and Fellows of the Society for January 1, 1928, is now in preparation. Fellows who have not already done so will confer a favor by sending recent changes of address to the Secretary, at 182 Walnut St., Brookline, at once.

WALTER L. BURRAGE, Secretary.

SECTION OF OBSTETRICS AND GYNECOLOGY

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Frederick J. Lynch, M.D., Clerk

Which is the better method of preparing a patient for home delivery—wet or dry?

Before proceeding to a discussion of the question it may be well to outline briefly the difference in the technique of the wet and the dry methods.

In the wet method a soap and water scrub followed by flushing with sterile water, bichloride of mercury, lysol, or alcohol solutions, singly or in various sequences is the technique usually adopted. In the dry method the procedures most extensively practiced employ either alcoholic solutions of iodine in concentrations varying from 2 to 3.5 per cent., sometimes preceded by fat solvents such as ether or benzine and occasionally followed by alcohol to remove the excess of iodine; or mercurochrome 220 (soluble) in 4 per cent. solution instilled into the vagina as well as applied externally.

Whatever technique be selected the exigencies of obstetric practice demand that it meet three important requirements—it must be efficient, safe and convenient. Properly carried out both methods appear equally efficient. Although the proponents of the iodine and the mercurochrome techniques claim lower morbidity for their methods, the soap and water technique in well supervised clinics has produced fully as good results. From the standpoint of safety to the patient there is on the one hand the irritation and occasional burn from iodine and the still open question of toxicity from absorption of mercurochrome, and on the other trauma to sensitive structures frequently inflicted by even gentle scrubbing. On the grounds of convenience however the dry method seems to have a marked advantage. Preparation by this method is easily and rapidly accomplished with either mercurochrome or iodine. The amount of solution required is comparatively small and under supervision, an untrained assistant may make the external application efficiently. Mercurochrome, while of high bacteriocidal capacity, dries slowly, leaves stains difficult of removal and if used in the vagina should be instilled at least one hour before delivery. Iodine preferably in solutions of 3.5 per cent. especially lends itself to preparation for home delivery because it may be applied quickly and thoroughly by assistants to whose unskilled hands the obstetrician might hesitate to entrust a soap and water preparation. If one foregoes the preliminary cleansing of the skin with ether or benzine and removes the excess of iodine with alcohol the incidence of burns or irritation will be negligible.

Preparation by the wet method requires a skillful and carefully supervised technique, can-

Table No. 8 shows Baby and Maternal Mortality:

Stillbirths	6 cases								
Macerated Foetus	3 cases								
Died after birth	<table> <tr> <td>First 24 hrs.</td><td>5 cases</td></tr> <tr> <td>First 48 hrs.</td><td>2 cases</td></tr> <tr> <td>Third day</td><td>1 case</td></tr> <tr> <td>Fifth day</td><td>1 case</td></tr> </table>	First 24 hrs.	5 cases	First 48 hrs.	2 cases	Third day	1 case	Fifth day	1 case
First 24 hrs.	5 cases								
First 48 hrs.	2 cases								
Third day	1 case								
Fifth day	1 case								
Total number of babies died after delivery	9, or approx. 15%								
Total maternal deaths	6, or sl. less than 10%								

Case No. 7565. Antepartum convulsions—Cesarean—died fifth day; Post-operative, of Peritonitis.

Case No. 7228. Antepartum convulsions—bag inserted and 8 hrs. later, delivered; 2 hrs after delivery, had a post-partum convulsion and patient died.

Case No. 7826. Entered in convulsion and in labor. 1 hr. after entrance, died despite stimulation—no operation.

Case No. 7389. Entered in convulsion—immediately prepared for Cesarean—died 10 min. after completion of operation.

Case No. 4009. Patient entered as impending Eclampsia—Blood Pressure 200/160. Cesarean performed—patient died sixth day—Peritonitis plus Endocarditis.

Case No. 7794. Patient entered hospital in convulsion and moribund. Cesarean performed because foetal heart was heard and it was hoped baby might be saved. No anesthetic used. Patient died 2 hours after operation.

THE EXHIBITION AT THE BOSTON MEDICAL LIBRARY OF WORKS OF ART BY PHYSICIANS OF NEW ENGLAND

JUDGING from the interest in this exhibition which has already been manifested by members of the profession, by the public generally, and especially because of the favorable criticisms on the part of professional artists and art critics, the exhibition itself may well be considered to be from an artistic point of view a distinct success.

In its medical aspects it is also interesting especially for two reasons. First it shows that physicians have an appreciation of art, and second it demonstrates an almost universal resource of the busy man through some form of mental and mechanical entertainment in which relief from the trying details of practice is sought. That fifty-six doctors in this region devote time to the expression of their ideals through sculpture, drawing, painting and otherwise is inspiring, and may lead others to engage in this diverting and enjoyable avocation which can be taken up even when they are deprived of the more athletic distractions in which perhaps the majority spend their time.

The exhibition consists of three hundred and four objects from fifty-six physicians. Many other applications by other physicians, made however after the Exhibition had been opened, had to be refused.

The following are the physicians (including

a few dentists) who have made contributions to the exhibition:

Dr. Edward P. Bagg, Jr., Holyoke.
Dr. Lawrence W. Baker, Boston.
Dr. Harry A. Barnes, Boston.
Dr. J. Dellinger Barney, Boston.
Dr. George H. Binney, Boston (deceased).
Dr. John Bapst Blake, Boston.
Dr. Harold Bowditch, Brookline.
Dr. Edward H. Bradford, Boston (deceased).
Dr. Adrian Paul Brodeur, Boston.
Dr. Alice G. Bryant, Boston.
Dr. Stanley Cobb, Milton.
Dr. Rockwell A. Coffin, Boston.
Dr. Frederic J. Cotton, Boston.
Dr. Joseph W. Courtney, Boston.
Dr. Thomas B. Curtis, Boston (deceased).
Dr. Harold W. Dana, Boston.
Dr. Frederick S. Delue, Boston.
Dr. Cecil K. Drinker, Brookline.
Dr. George W. Galvin, Boston.
Dr. David H. Gibson, Cambridge.
Dr. Maurice A. Gilbert, Chelsea.
Dr. William P. Graves, Boston.
Dr. William W. Harvey, Boston.
Dr. Paul F. Henson, Swampscott.
Dr. William Herman, Boston.
Dr. Lewis W. Hill, Boston.
Dr. George L. Howland, Boston.
Dr. Frederick C. Irving, Brookline.
Dr. Isabelle D. Kerr, Boston.
Dr. Morris Lee King, New Canaan, Conn.
Dr. Ralph C. Larrabee, Boston.
Dr. Henry F. Libby, Boston.
Dr. Arthur B. Lyon, Boston.
Dr. J. Howard Means, Boston.
Dr. George H. Monks, Boston.
Dr. Henry Lee Morse, Medfield.
Dr. Harris P. Mosher.
Dr. Albert A. Pastene, Norton, Mass.
Dr. Claude L. Payzant, West Medford.
Dr. Hale Powers, Northampton.
Dr. Tracy J. Putnam, Brookline.
Dr. Alfred C. Redfield, Readville.
Dr. Frank L. Richardson, Boston.
Dr. William Rimmer, Boston (deceased).
Dr. Eli C. Romberg, Boston.
Dr. Lucius Manlius Sargent, Boston (deceased).
Dr. Walter F. Sawyer, Fitchburg.
Dr. Howard B. Sprague, Boston.
Dr. C. Ellery Stedman, Boston (deceased).
Dr. Edward C. Streeter, Boston.
Dr. Nathan R. Sylvester, Jr., Somerville.
Dr. Fritz B. Talbot, Boston.
Dr. Grantley W. Taylor, Brookline.
Dr. Francis S. Watson, Boston.
Dr. Sidney C. Wiggin, Boston.
Dr. Ernest B. Young, Boston (deceased).

A BULLETIN OF THE DEPARTMENT OF EDUCATION

DIVISION OF THE BLIND

Director: Robert I. Bramhall.

Advisory Board: Edward E. Allen, John D. W. Bodfish, Arthur C. Coggeshall, Arthur F. Sullivan, Mrs. Agnes C. Taff.

Executive Offices: 110 Tremont Street, Boston.

Blinderaft Shop: 39 Newbury Street, Boston.

Workshops for Men at: 26 Lansdowne Street, Cambridge; 418 Second Street, Fall River; 159

Moody Street, Lowell; 30 Eagle Street, Pittsfield; 33 Highland Street, Worcester.

Workshop for Women at: 48 Inman Street, Cambridge.

During the year ending November 30, 1926, the Division of the Blind was in touch with 2,987 adults and over 1,100 children who are blind or have low vision. There were 366 new cases of adults reported to the division and investigated. Of the 542 newly reported cases of children, 231 responded to corrective glasses and 311 were registered. Of the group of 311 registered, 17 were totally blind; 80 had 20/200 of normal vision; 49 had 20/100 or less; 99 had 20/50 or less; and 66 had better than 20/50 or the amount of vision could not be determined.

The division made the necessary arrangements for the admission of 19 children to Perkins Institution, 120 to sight-saving classes and 2 to the Blind Babies' Nursery. Large type textbooks have been provided for about 40 children with low vision living in the rural sections of the State.

During the year two new sight-saving classes were opened—one in Boston, and the other in Springfield. Sight-saving classes are now maintained by the local school authorities in Boston (11), Brockton, Cambridge (2), Chelsea, Fall River (2), Holyoke, Lowell, Lynn, New Bedford (2), Newton, Salem, Somerville, Springfield and Worcester (2). There are about 350 children enrolled in these 28 sight-saving classes. These children have too much sight to be educated as blind children at Perkins Institution, and yet have too little sight to be taught effectively in the regular public school classes. The State reimburses each city in the sum of \$500 annually for each class. The division has made surveys in Haverhill, Lawrence, Medford, and Revere and has recommended the establishment of a sight-saving class in each city.

The division has provided training for 288 blind adults. Employment has been secured for 37 persons in factories, stores, and offices. Employment has been furnished for 132 by the division. Financial assistance has been given to 722. Assistance has been given to 173 in the development of home industries through the loan of equipment, provision for guides, or marketing of products. Information and advice was given to 1,479. Vacation trips, concert and theater tickets and similar recreations were provided through friends for 376 persons. Visits were made to 942 persons for whom no special service was rendered.

The seven home teachers gave 3,595 lessons to 261 pupils and made 1,621 calls. The home teachers gave instruction in reading Moontype, reading and writing Braille, basketry, reseating chairs, knitting, tatting, crocheting, sewing, typewriting and the common school branches. An important phase of their work is teaching the newly blinded adult how to be blind.

On May 1, 1926, the salesroom was moved to a more convenient shopping center at 39 Newbury St., Boston, and its name was changed to the Blindcraft Shop. During the year consignments were received from 115 home workers as well as from the Woolson House Industries.

Special sales were held during the year at Jay's store, Boston, at the Christmas sale of the New York Commission for the Blind in New York City, at Brewster, Brockton, Brookline, Dedham, Framingham, Gloucester, Leominster, Marblehead, Newton, Orleans, Quincy and Swampscott. There were exhibitions of the work conducted in connection with the Modeltown, Craftsmen-at-Work and Home Beautiful Expositions in Boston, Brockton Fair, Eastern States Exposition at Springfield, and the Cambridge Exhibition at Cambridge. In each community, local organizations formed committees to cooperate in the arrangements and stimulated interest in the demonstrations and sales.

The division maintained workshops in Cambridge (2), Fall River, Lowell, Pittsfield and Worcester, in which employment was furnished for 16 blind women and 98 blind men. In the Cambridge Industries for Men, where 53 blind workmen were employed, 9,882 dozen brooms were manufactured during the year. Mops and rugs were also manufactured in this shop. In the Woolson House Industries, weaving art fabrics on hand looms and reseating chairs were the occupations carried on. They reseat 2,285 chairs. In the Fall River Workshop 1,290 dozen brooms were manufactured and 1,531 chairs reseat. In the Pittsfield Workshop, 1,934 dozen brooms were manufactured and 2,463 chairs reseat. In the Lowell Workshop 2,647 chairs were reseat, and in the Worcester Workshop, 4,331 chairs.

The receipts from sales at these workshops were as follows:

Cambridge Industries for		
Men		\$86,267 27
Rug shop	\$9,151 56	
Mop shop	20,537 44	
Broom shop	54,882 22	
Cane supply	1,696 05	
Woolson House and sales-		
room		15,027 74
Local workshops		46,475 40
Fall River	10,704 05	
Lowell	6,954 40	
Pittsfield	20,292 17	
Worcester	8,524 78	
Total receipts		\$147,770 41

Expenditures

General administration		\$38,770 27
Administration	\$35,816 82	
Industrial and educational aid	2,953 45	
Local workshops		65,259 41
Fall River	14,940 55	
Lowell	11,007 93	
Pittsfield	27,579 12	
Worcester	11,731 81	

Cambridge Industries for Men	140,560 45
General	37,767 32
Rug	12,250 97
Map	18,012 84
Broom	69,488 51
Cane	3,040 81
Woolson House Industries and salesroom	26,293 25
Woolson House Industries	\$16,510 45
Home work	5,132 34
Salesroom	4,650 46
Home teaching	14,998 37
Sight-saving classes	14,000 00
Financial relief	125,499 07
Total expenditures	\$425,380 82

THE RHODE ISLAND SOCIETY FOR MENTAL HYGIENE

BY ESTHER F. GREENE

General Secretary, Rhode Island Society for Mental Hygiene

THE Rhode Island Society for Mental Hygiene was organized in 1916 in line with several other state societies, and has been from the beginning closely, though never officially, allied with the National Committee. Some educational and clinical work was carried on in the first years, but war time and post war activities prevented further development for the time being.

After a series of widely attended meetings, held jointly with the National Committee, a small fund was raised, and in November, 1922, an office was opened and the present secretary installed to organize and to carry on an active program.

Soon after the reorganization of the Society, at the request of the Public Welfare Commission, the National Committee conducted a mental health survey of the state under the direction of Dr. Samuel Hamilton. This made an unusually fortunate beginning for the society as the survey itself, as well as the final report, received a great deal of newspaper publicity and aroused much comment. By this publicity the state's need for such a society was easily and convincingly brought before the public. The work of the society is primarily educational.

This work has been carried on by lectures, talks before Parent-Teacher Associations and other groups in various parts of the state, newspaper articles, personal interviews, discussion meetings of social workers, study classes and conferences. Closely following the survey a widely attended state conference on "What shall we do for the mental health of Rhode Island?" was held at the Rhode Island College of Education.

While clinical facilities were available in Providence (although not nearly enough to meet the needs) there was none, nor prospects of any, in other parts of the state. In consequence, in March, 1924, as part of the educational program

a clinic was opened in Central Falls, in rooms supplied by the Public School Board, as a demonstration of the needs and possibilities of such work. For a year before the clinic opened much educational work was done in preparation in order to gain the intelligent interest and cooperation of the schools, medical profession and others. The rather unexpected and immediate success of the clinic proved that this preliminary work was well worth while. The staff consisted at first of a psychiatrist, Dr. George K. Pratt, whom the Massachusetts Society kindly released for one day a week; a half-time psychologist; and a stenographer for a few hours a week. The social work was carried on by the secretary with volunteer assistance.

From the first the clinic worked closely with the schools, and has continued to do so although as time goes on more and more cases come direct from homes or are referred by physicians or friends. While the clinic is open to any one who seeks its aid, and a number of adults have attended, by far the greatest part of the work is with children and is preventive in nature.

The following October, in response to an invitation to make use of their clinic facilities, the work was moved to the Red Cross Public Health Center, close to the line between Central Falls and Pawtucket, and was made available to both cities. A full-time social worker was engaged and adequate stenographic work was supplied.

The society has been instrumental in initiating a demonstration clinic in Providence, financed for three years, to work particularly with school children. The society, in addition, is about to begin a short clinical demonstration, locally supported, in a town near Providence. People in various parts of the state are showing a growing interest in these clinics.

For the past two years the society has had some contact with the Juvenile Court, and the more urgent cases were referred to an existing clinic. This, however, did not work out satisfactorily. At the request of the judge, chief probation officer, and others interested, a clinic was opened last May with a full-time social worker, half-time psychologist, and a psychiatrist for two days a week.

Until the past year the society has been financed by private subscriptions. At present it is supported by the Community Funds of Providence and Pawtucket and by a few subscriptions from other parts of the state. The Court Clinic is separately financed by private subscription.—*Abstracted from the Monthly Bulletin of the Massachusetts Society of Mental Hygiene.*

MEDICAL CARE FREE TO VIRGINIA TEACHERS

A "preventorium" for Virginia teachers who need preventive medical treatment has been provided by the Virginia Education Association. It will be located

at Charlottesville, in the hospital unit of the University of Virginia, now under construction, and will embrace 20 rooms, accommodating 20 patients at a time. Under the arrangement entered into with the University, a contribution of \$40,000 is made by the Association toward the cost of the building, \$20,000 of which has already been paid, the remaining \$20,000 to be paid upon completion of the building.

The charge to teachers will be \$4 per day, with a minimum charge of \$15 to any patient. This will cover the cost of professional service, room, nursing, and board. Physicians and surgeons of the hospital agree to make no charge to patients in the preventorium.—*U. S. Daily.*

NEW YORK UNIVERSITY OPENS CLINIC FOR STUDY OF ASTHMA, ECZEMA, AND HAY FEVER IN CHILDREN

The announcement of the opening of a special clinic and laboratory by New York University and located at the new Sydenham Hospital, at 123rd Street and Manhattan Avenue, was confirmed today by Dr. Samuel A. Brown, dean of the New York University and Bellevue Hospital Medical College, and Dr. Siegfried Wipshamm, medical director of the Sydenham Hospital.

The clinic is designed to study exclusively cases of asthma, eczema, hives, hay fever and other allergic diseases of children from infancy up to puberty. It was made possible by the gift of \$30,000 by a friend of the University. Adequate hospital and laboratory facilities have been arranged for an intensive study of these diseases.

BILL WOULD REGULATE SALE OF COSMETICS

A bill to regulate the use and sale of cosmetics containing poisonous or deleterious substances is to be introduced in the next session of Congress by Senator Copeland of New York.

THE MENACE OF RABIES

An alarming increase in the number of rabid dogs has led the State Department of Public Health to take appropriate action based on the demonstrations furnished by 269 positives in the examination of a large number of heads of suspected dogs. During this year 238 persons have been bitten and two deaths have occurred.

Dog owners in a large section in the eastern part of the State will be asked to cooperate in efforts to reduce the danger by keeping dogs confined. It may be necessary to institute drastic measures if their cooperation is not forthcoming.

It may also be necessary to require immunization of dogs. Unfortunately many people are disinclined to accept the opinions of scientists and even doubt the existence of rabies. The conditions certainly demand attention and the action of the State Department of Health should be endorsed by physicians.

HOW FAR DOES POLLUTION TRAVEL IN THE GROUND?

This is a favorite question put to health officials, particularly by persons who have on their property wells which are close to privies, cesspools, barn drainage or the like. The United States Public Health Service in its recently issued Bulletin No. 147 publishes the results of a unique set of experiments of travel of pollution carried out over a period of many months in sandy soil in North Carolina where the conditions were similar to those prevailing in certain parts of Connecticut.

The first condition investigated was where direct contact pollution of the ground water occurs. This was accomplished by digging a shallow trench extending to the ground water and inserting sewage pollution by cow manure and human excreta together with a chemical dye, uranin. Various wells were then put down close by and careful observations of the appearance of B. coli and chemical pollution in these wells made. Other sets of experiments were carried out by introducing pollution in trenches above the ground water and pouring in water to wash the pollution down to the ground water.

As might be expected, the pollution traveled only in the direction of flow of ground water—usually, but not always, the same as the ground slope. No bacterial or chemical pollution was discovered on the upstream ground water side of the polluted trenches. On the downstream side, bacterial pollution, as shown by the presence of B. coli, traveled distances varying from 1 to 232 feet, whereas uranin dye could be traced a distance of 450 feet. It was found that the pollution traveled in the direction of ground water flow in a narrow belt, usually smaller than the width of the polluted source—as the width of a privy—instead of spreading out fan shaped. Therefore, the further away a well is from the source of pollution, the less is the probability of intercepting the pollution.

With regard to the effect of dry and wet weather, it was found that as the ground water table lowers, due to dry weather, most of the bacterial and chemical contamination filtered out into the top edge of the water zone and became stranded in the dry soil. With the continuance of dry weather, the bacteria died. If, however, wet weather brought a rise in the ground water level, the pollution was carried upwards and spread. A subsequent drop of the water level would result in stranding the pollution still higher. Therefore, the alternating dry and wet weather furnishes a natural means of purification.

Of course, wet weather tends to wash pollution into the ground water which supplies wells. It is of interest that water washed into trenches containing pollution carried B. coli through sand for a distance of five feet below the trench bottom into the ground water.

Many arbitrary distances as to separation between water supplies and sewage disposal systems have been adopted. Experience would indicate that less than 50 feet is dangerous and that 100 feet is preferable. These experiments indicate pollution can travel for longer distances in sandy soil. Although pollution does not travel against the direction of ground water flow, pumping might change the direction of flow. In some formations where large crevices occur, such as limestones, pollution has been known to travel for miles.

The moral of this discussion is to locate wells as far as possible away from sources of pollution, provide water-tight excreta containers where possible, and in general to locate wells on higher ground than surrounding sources of pollution. Arbitrary safe distances are difficult to establish because of the variation in conditions. From the results of these experiments cited, the most dangerous pollution zone is between the level of highest ground water and about 1 foot or less below the lowest ground water so that leaks in a well pipe passing through this zone are dangerous. Deep burial of excreta also appears from the experiments to be more dangerous than burial high above the ground water table. If a dye such as uranin is placed in a privy vault at the time of its construction, the appearance of the chemical in a nearby well would undoubtedly furnish a warning ahead of any bacterial contamination.—*Bulletin of the Connecticut State Department of Health.*

RECENT DEATHS

SCHALLENBACH—DR. ERNEST BRADFORD SCHALLENBACH, a graduate of Harvard Medical School in 1901, died at the Peter Bent Brigham Hospital, Boston, November 26, 1927, at the age of 49. His home was in Chelsea, where he was prominent in Masonic circles.

Dr. Schallenberg is survived by his widow, Helen G. Schallenberg.

FINN—DR. EDWARD WILLIAM FINN, a practitioner of Brookline, died at his home in that town December 1, 1927, at the age of 59. He was born in Dedham in 1868, attended Phillips Exeter Academy and Boston College. He was graduated from the Harvard Medical School in 1890 and joined the State medical society in that year. He continued his medical studies in Dublin and Vienna and at one time was an assistant to Dr. Adolf Lorenz, famous Austrian exponent of bloodless surgery.

Dr. Finn was formerly active in municipal affairs in Dedham and served many years as chairman of the Board of Health of that town. He also acted as a trustee of the Capen fund. During the war, Dr. Finn served with the United States Shipping Board and later was a specialist on diseases of the nose and throat for the Veterans Bureau.

He is survived by his widow, two daughters and five brothers, two of whom are the Very Rev. Charles A. Finn, rector of St. John's Seminary, Brighton, and Rev. Aloysius R. Finn of St. Mary's Church of the Assumption, Brookline.

OBITUARY

ORLAND JONAS BROWN, M.D.

Dr. Brown, for forty-five years medical examiner of district No. 1 of Berkshire county, died at his home in North Adams, after a long illness, November 24, 1927, at the age of 79. He was born at Whittingham, Vermont, February 2, 1848, received his education in the Vermont public schools and at the Powers Institute at Bernardston, Massachusetts. His medical degree was taken at the University of Vermont College of Medicine, Burlington, in 1870, supplemented by study in New York city. Settling in practice at North Adams he joined the Massachusetts Medical Society in 1873. From 1873 to 1889 he was assistant surgeon and surgeon to the Second Regiment, Massachusetts Volunteer Militia, retiring with the rank of Lieutenant Colonel. Maybe his military service gave him something of his upstanding military carriage for he was a well-set-up man, always neatly dressed, ready for any emergency. For one term, in 1889, Dr. Brown was a member of the Massachusetts House of Representatives, and he served as health officer in North Adams for a series of years. From 1893 to 1913 he was a councillor from Berkshire in the Massachusetts Medical Society, being constant in his attendance at the meetings of the Council in Boston. Among the societies in which he held membership may be mentioned: the National Association of Military Surgeons, the American Medical Association, the Northern Berkshire Medical Society and the Association of Military Surgeons of the United States. As medical examiner Dr. Brown had received appointments from seven different governors, beginning with John D. Long, 1882, and had served under eight governors and eleven district attorneys, his service starting only a few years after the system of medical examiners had replaced the coroners, in 1877. In later years Dr. Brown had devoted himself to the specialty of pediatrics. He will be much missed in his community.

Dr. Brown had been in poor health for a number of years and had spent the winters in Florida. His final illness was of only ten days' duration.

He is survived by his widow and two children.

CORRESPONDENCE

COMMENT ON AN EDITORIAL

November 28, 1927.

Editor, *Boston Medical and Surgical Journal*:

Your "explanation" to the *Journal of the American Medical Association* will meet the approval of all subscribers to THE BOSTON MEDICAL AND SURGICAL JOURNAL.

Sincerely,

C. H. WHEELER.

INSULIN

November 22, 1927.

Editor, *Boston Medical and Surgical Journal*:

The other day I received the accompanying verse, which I thought might interest some of your readers.

Yours sincerely,

REGINALD FITZ, M.D.

INSULIN

BY FREDERICK O. GORMAN*

I'm only a kid, and don't know the lot
Of drugs and such stuff the doctors have got;
But there can't be one better in all of their store,
Than the one that I took,—and took some more!

It's named awful funny—at least for me,
So I call it "dope"—which is easy, you see.
Doc calls it "insulin," and you've often heard
It cures "diabetes" (another strange word!)

Perhaps there are things far harder to bear
Than to be "diabetic"—but they must be rare.
When a kid's diabetic, he's plain out of luck;
He needs all doc's help, and all his own pluck.

Dad doesn't say much—he's just wondering why
His boy has to suffer, even ready to die.
And mother—well, gee, it hurts me to know
She's almost as sick, she's worrying so.

And then comes Doc Banting with real words of cheer,
Bringing real hope along, and banishing fear
With "insulin"—"dope" that he almost feels sure
Will help the kid's health and may even cure.

Many a long day we wait for this "dope"
That brings all we have by way of real hope.
The weeks drag along, and doc comes and goes
With his insulin stuff, whose value he knows.

That word comes to sound like the name of a friend,
We use it so often. It has power to send
Such joy to our hearts, all saddened with doubt,
For it tells that the foe will be soon put to rout.

And now it's a fact—or as near as can be,
I'm a sick boy no longer, and happy? say, gee.
You can't know my feelings, and I just can't tell
But I do know it's Heaven, just to be well.

And I'm not the only one happy, I'll say,
For doc's just as happy, but in his own way.
He's done a good job, and has right to feel glad,
For my case was one of the hardest he's had.

*The writer is a diabetic 16 years old who has survived three attacks of coma, one complicated by an acute gangrenous appendicitis.

I thank our dear Lord, heeding prayer of a boy
To give him his health, and bring him true joy;
And I thank the good doctor, Banting's his name,
By whom both the health and the happiness came.

And insulin, too, the "dope" that doc gave
To lick diabetes, and my life to save,
I'll never forget, its praises I'll sing
And tell of its powers, renewed health to bring.

INVITATION TO VISIT THE NEW BUILDINGS OF THE ANTITOXIN AND VACCINE LABORATORY

December 2, 1927.

Editor, Boston Medical and Surgical Journal:

I wish to extend to all members of the medical profession and to all members of local health boards, a cordial invitation to visit and inspect the new buildings of the Antitoxin and Vaccine Laboratory at Forest Hills, on Tuesday, December 13.

The buildings will be open for inspection from 9 in the morning until 6 in the evening.

The Laboratory is on the grounds of the Bussey Institution, west of the intersection of the Arborway and South street and can be easily reached from the Forest Hills station of the Elevated; from the Forest Hills station of the N. Y. N. H. and H. R. R.; from the Forest Hills surface electric car (Arborway) and by motor from the Arborway.

Sincerely yours,

GEORGE H. BIGELOW, M.D.
Commissioner of Public Health.

THE COST OF MEDICAL CARE

December 3, 1927.

Editor, Boston Medical and Surgical Journal:

This is what you call a prompt reaction. In the last issue of the JOURNAL the leading editorial is entitled "The Cost of Medical Care". In this editorial you quote from Dr. Louis I. Dublin, who states that "\$60-\$80 a year is spent on the average by each family for medical expenses. This is a heavy drain on the average family." It is this latter statement which interests me. \$60-\$80 represents one or two weeks' wages of the average family. In these days when practically every workman has a Ford car if not some higher priced vehicle to go to and from his work, I cannot agree either with the writer of the editorial or Dr. Dublin that such an amount as this paid to doctors is a serious drain on the family resources while on the other hand buying automobiles on the installment plan, coonskin coats and radio sets in the same way, constitute a real drain.

There is no particular point to this letter except that I think that Dr. Dublin has exaggerated matters as far as the payment for medical services is concerned. I should say that the \$60-\$80 these people thus spend is by all means the best investment they have made and infinitely better than the other things I have just mentioned.

Sincerely yours,

JOHN B. HAWES, 2ND.

NEWS ITEMS

OFFICERS OF THE CIVIL LEGION—The Civil Legion, a national organization composed of those who in non-uniformed activities rendered patriotic service to the national cause during the World War, has held its second national convention and elected as its officers the following:

National President: Charles R. Wilson of West Virginia.

National Vice-Presidents: Tom Jones Meek of New

York, Charles A. Howard of South Dakota and J. C. Heinlein of Ohio.

National Secretary: John T. Tansey of Chicago.

National Treasurer: Frank G. Hajicek of Chicago.

National Legal Adviser: Hon. William Lloyd Harding, War Governor of Iowa.

National Chaplain: Rt. Rev. James H. Darlington, Episcopal Bishop of Harrisburg, Penn.

National Historian: Miss Leafa H. Seibert of Prophetstown, Ill.

Member of the Executive Committee from the State of Massachusetts: Hon. Frank G. Allen of Boston.

National headquarters are at 163 West Washington Street, Chicago, Ill.

The Civil Legion is to its members what the American Legion is to the ex-service men.

Following are members of the State Executive Committee: Dr. Frank C. Granger of Randolph, Dr. Ernest P. Brigham of Worcester, Dr. D. Sidney Woodworth of Fitchburg and Dr. John J. Gorman of Fall River.

RECONSTRUCTION OF THE NEW YORK BOARD OF HEALTH—Dr. Louis I. Harris, Commissioner of Health, has entered upon a campaign for the reorganization of the New York Board of Health.

He wants much the same kind of an organization which we have in Massachusetts, free from political interference and with more power to control employees. He is evidently disgusted with existing conditions.

RESIGNATION OF F. L. DAVIS—Frederick L. Davis, Deputy Health Commissioner of Boston, has resigned. He has been in charge of the Division of Vital Statistics, Records and Accounts.

He has been employed in the Health Department in different capacities since 1881.

APPOINTMENT OF DR. LOUIS F. BAKER—Dr. L. F. Baker, formerly superintendent of a Fall River hospital, has been elected superintendent of the Central Maine General Hospital at Lewiston, Me.

ELIOT H. LUTHER, M.D., announces the opening of an office for the practice of Pediatrics at 270 Commonwealth Avenue, Boston, Massachusetts.

MEDALS AWARDED TO SCHOOL CHILDREN—Plymouth, Massachusetts awarded bronze medals at the end of the school year to those school children who were up to weight, had all defects corrected, carried a high scholarship record, and were capable of doing cooperative work with their classmates. These were called 100% children.

The award was made by the school physician after consultation of teachers, principals, nurse and doctors.

A CONTEST IN THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK—A group of doctors in this Society has shown a revolutionary disposition based on the charge that the Society has failed to protect the interests of its members against the encroachments of the Life Extension Institute, commercial laboratories, pay clinics, and insurance companies.

The purpose of the opposition is to elect officers who are in sympathy with the dissatisfied members. A vote of 1644 ballots endorsed the present administration.

SEA TRIP AS CURE FOR TUBERCULOSIS—Publicity is being given to a plan under consideration for sea voyages for patients with pulmonary tuberculosis. The plan is under the direction of Professor Bernard of France. The vessel will be equipped as a floating sanatorium with especial facilities employing the therapeutic effects of sunshine. The voyage will be extended to the West Indies.

A HOSPITAL DRIVE IN NEW YORK CITY—A group of fifty-six hospitals in New York, caring for about a million patients annually and expending twenty million dollars, has arranged for a drive for a million dollars to meet deficits. The first week of the campaign brought in one fourth of the amount which is being sought. This money will be used for the free care of those who are too poor to pay.

Committees representing more than thirty professions and trades are coöperating. Individual contributions have been large, one person having given ten thousand dollars. Whenever well-managed hospitals appeal for funds, the charitably disposed persons always come forward.

THE CAMPAIGN OF THE NEW YORK CITY COMMITTEE OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER—This movement is in full swing in New York City and the educational features are centered in newspaper bulletins and addresses. Dr. Levin, Director of the New York City Cancer Institute, believes in publicity and reports that he can tell whether an article has appeared in the newspapers the day before when he arrives at the clinic on any given morning. Publicity always induces more people to apply.

DR. GEORGE R. MINOT, on November 2, delivered the eighteenth Mary Scott Newbold lecture at the College of Physicians, Philadelphia, on "The Treatment of Pernicious Anemia."

DR. C. MACFIE CAMPBELL, Professor of Psychiatry in the Harvard Medical School, delivered the eighth Pasteur lecture before the Institute of Medicine of Chicago on "Some Problems of the Functional Psychoses."

REMOVAL

Dr. Louis E. Phaneuf, formerly of 395 Commonwealth Avenue, Boston, has changed his address to the Professional Building, 270 Commonwealth Avenue, Boston, Mass.

SUPPORT OF MEDICAL RESEARCH—In addition to gifts of over half a million dollars Mr. James N. Gamble has assumed the entire cost of establishing and maintaining a great institute for medical research in Christ Hospital, Cincinnati.

DR. C. E. SPEARMAN VISITS BOSTON—Dr. C. E. Spearman of the University of London, a psychologist of note, has recently honored Boston by lecturing and studying local institutions.

He is the guest of the Commonwealth Fund, endowed by the Harkness family.

He was the honor guest at a dinner at the Harvard Club, November 29, 1927, and delivered a lecture before the Graduate Education Club on the Powers of the Human Mind.

He was entertained at the home of Dr. Morton Prince while in Boston.

NOTICES

THE AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held in Detroit on September 12, during the session of the American Academy of Ophthalmology and Otolaryngology. One hundred and two applicants appeared for examination, with .107 per cent. failures.

An examination was held in Memphis on November 14, preceding the session of the Southern Medical Association, with .127 per cent. failures.

In the course of the past year, 369 applicants have been examined.

In 1928, examinations will be held in Minneapolis, on June 11, at the session of the American Medical Association, and in St. Louis, on October 15, during the meeting of the American Academy of Ophthalmology and Otolaryngology.

Prospective applicants for certificates should address the Secretary, Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, for proper application blanks.

DR. H. P. MOSHER, *President*.

DR. W. P. WHERRY, *Secretary*.

UNITED STATES PUBLIC HEALTH SERVICE

CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

NOVEMBER 16, 1927

Associate Sanitary Engineer E. C. Sullivan. Directed to proceed from New York, N. Y., to such points in the New England States as may be necessary to assist the State and local health authorities in the prevention of the spread of smallpox and other epidemic diseases in the New England flood region. November 4, 1927.

Passed Assistant Surgeon F. A. Ashford. Relieved from duty at Bergen, Norway, and assigned to duty at Dublin, Irish Free State. November 8, 1927.

Surgeon H. F. Smith. Relieved from duty Dublin, Irish Free State, and assigned to duty at Bergen, Norway. November 8, 1927.

A. A. Surgeon Fred T. Foard. Directed to proceed from Jackson, Miss., to Memphis, Tenn., and return, relative sanitary measures being applied in the States affected by the recent flood for the prevention of the spread of epidemic diseases. November 9, 1927.

A. A. Surgeon Antonio Mayoral. Directed to proceed from Ponce to San Juan, P. R., and return, for the purpose of inspecting and condemning unserviceable property at San Juan. November 9, 1927.

Assistant Surgeon General C. C. Pierce. Directed to proceed to New York City, to deliver address at Mouth Hygiene Conference, November 15. November 10, 1927.

Surgeon Robert Olesen. Directed to proceed from Cincinnati, Ohio, to Evansville, Ind., and return, to make health survey of Evansville. November 12, 1927.

Surgeon J. P. Leake. Directed to proceed from Washington, D. C., to Morgantown, W. Va., for the purpose of discussing the subject of poliomyelitis at the conference of health officers to be held in that city, November 22-24, 1927. November 12, 1927.

Surgeon R. E. Dyer. Directed to proceed from Washington, D. C., to Asheville, N. C., and return, to inspect the Bacterio-Therapeutic Laboratory. November 12, 1927.

Surgeon L. R. Thompson. Directed to proceed from Washington, D. C., to New York, N. Y., and return, in connection with field investigations of industrial hygiene and sanitation being conducted by the Public Health Service. November 15, 1927.

Surgeon C. H. Waring. Assigned to duty at the Hygienic Laboratory, Washington, D. C. November 16, 1927.

BOARDS CONVENED

The following Coast Guard boards convened to meet at the following places at 10:30 a. m., November 28, 1927, for the purpose of determining the physical eligibility of warrant officers for promotion to the grade of Chief Warrant Officer in the United States Coast Guard:

Chicago, Ill. Detail for the Board: Sr. Surgeon M. H. Foster, Surgeon J. H. Linson.

New London, Conn. Detail for the Board: Surgeon C. P. Knight, A. A. Surgeon H. R. Collins.

Portland, Me. Detail for the Board: Surgeon George Parcher, Assistant Surgeon E. T. Lentz.

Washington, D. C. Detail for the Board: Surgeon G. L. Collins, A. A. Surgeon C. H. McEnerney.

San Pedro, Calif. Detail for the Board: Surgeon H. A. Spencer, Assistant Surgeon W. H. Gordon.

Key West, Fla. Detail for the Board: Surgeon M. S. Lombard, Attending Specialist W. R. Warren.

Stapleton, N. Y. Detail for the Board: Surgeon S. L. Christian, Assistant Surgeon G. H. Welch.

San Francisco, Calif. Detail for the Board: Surgeon R. W. Hart, Assistant Surgeon W. J. B. McAuliffe.

Norfolk, Va. Detail for the Board: Surgeon (R) W. L. Smith, P. A. Surgeon (R) B. S. Hanna.

Seattle, Wash. Detail for the Board: Assistant Surgeon J. R. Murdock, A. A. Surgeon C. H. Turpin.

Boston, Mass. Detail for the Board: P. A. Surgeon (R) W. E. McLellan, Assistant Surgeon L. J. Hand.

Baltimore, Md. Detail for the Board: Surgeon J. W. Trask, Assistant Surgeon Ralph Horton.

Port Townsend, Wash. Detail for the Board: Surgeon F. H. McKeon, Surgeon (R) S. A. DeMartini.

Official:

H. S. CUMMING, Surgeon General.

REPORTS AND NOTICES OF MEETINGS

MEETING OF THE MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE

The annual meeting of the Massachusetts Society for Mental Hygiene was held November 16, 1927, at the Twentieth Century Club.

The following officers and directors were re-elected: Officers: President, Dr. C. Macfie Campbell; Vice-President, Herbert C. Parsons; Secretary, Dr. Charles E. Thompson; Treasurer, Romney Spring; Assistant Treasurer, Dr. Donald Gregg.

Directors: Dr. E. Stanley Abbot, Dr. William A. Bryan, William H. Burnham, Ph.D.; Dr. Elisha P. Cohoon; Elton Mayo, Dr. Ransom A. Greene, Mrs. Robert F. Herrick, Mrs. Jessie D. Hodder, William A. Neilson, LL.D.; Mrs. Ada Sheffield, Romney Spring, Charles E. Ware.

Dr. Elkind, Medical Director, in his annual report referred to the progress which the society has made in various fields, particularly in business and industry, research, education, social service, and stabilization of finances. The greatest success has come in establishing a relationship with industrial organizations. Directors of industry have shown much interest in the society's program and have welcomed cooperation and counsel. Progress in research has been notable, especially in the study of schizophrenia at the Psychopathic Hospital. Dr. Elkind acknowledged the bequest to the society of \$50,000 from the late Miss Ireson, and concluded by outlining the program for next year.

Dr. C. Macfie Campbell, President, then introduced Mr. Richard Feiss, Management Consultant, who spoke on "The Mental Hygiene of the Management." He stressed the importance of mental health in maintaining efficiency in industry. In an organization, management methods should be so planned that work may be conducted without friction. Every one must have a clear understanding of his duty. Responsibility rests with the chief executive, who must have adequate knowledge, experience and vision, and be unprejudiced in applying the principles of management. A business that has apparently been run successfully for years, often gives rise to the obsession that its condition cannot be improved. New theories are regarded as dangerous. The manager realizes the futility of trying to make changes. Lack of sympathy and criticism of his plans disturbs his mental hygiene. This disturbance affects

the entire organization and its work. Sympathetic understanding and cooperation are essential to maintain the mental health of the management.

Dr. Payson Smith, State Commissioner of Education, discussed the subject of "The obligations of the school as to the mental health of the child." He remarked that when we require by law that children shall attend school for many days of considerable length, we should consider, not the favors we bestow upon them, but our obligations to them. Appropriations are regarded as philanthropy, rather than duty. There has been considerable interest in the statement issued by the Boston Real Estate Exchange, the officials of which have been disturbed by the rising cost of education. Dr. Smith feels that we must meet our responsibilities toward children rather than toward real estate, and that it is our obligation to spend some of our wealth on education.

He enumerated seven points to be met by the society.

1. We must provide all children with the school buildings and environment that are physically correct.

2. We are responsible for seeing that the children, when they go into this physical environment, find there the right spiritual and mental atmosphere. Schools must be organized so that their institutional atmosphere is minimized and the change from home to school is not radically different. School buildings to which children first go should be small, and classes small in number. Many children are disturbed by the great institutional buildings to which they are sent and it takes considerable time for them to overcome their fear.

They need simplicity. We project into their minds too many things which represent our restless age. We think they like activity. They are active within limited boundaries, and they are upset by tendencies to read into their inclinations things which are not there. We ought to make schools as little mechanical as possible.

3. Before the children come to school we ought to place before them and their parents some definite expectations of what is to be done during the school year. The objectives of education must be organized so that parents may know what the teacher is trying to accomplish for the child in a given period.

We are not going away fast enough from the notion that we can educate children in crowds. It is unfortunate that our requirements are based on the possibilities of the average child. There are two harmful things: to give a child a task greater than his strength, and not to give a task equal to his strength. To find the exact proportion is what education must achieve.

4. We ought to conduct schools from the child's point of view. Children are supposed to be interested in certain things at certain ages. We organize classrooms in accordance with adult tastes. It is a serious fault. The child must adjust himself to the attitude of the teacher, the classroom, and the other children. His environment may not be altogether happy.

5. We must make provision for the exceptional child at both ends of the scale. Great advance has been made in establishing special classes for those who are not able to keep up with the normal children.

6. We ought to consider seriously the extent to which children develop individual dreads. Many dreads are built up in innocent, thoughtless ways. Dr. Smith feels firmly that corporal punishment has no place in the discipline of children, and the dread of it should be avoided.

There is too great a competitive element in our schools. Where one class competes with another in the matter of attendance, a child may attend school whether sick or well.

7. We ought to foresee and plan for as accurately as we can the definite crises which we know come in the lives of children. One of the most important is the crisis of industrial adjustment. The boy of sixteen or eighteen needs more sympathy than any one in the world. He faces the hardest problem he has ever faced.

Dr. Smith stated that the solution of all is to send into our schools not theories, beliefs and principles, but men and women of character, fine human understanding, sympathy and love.

THE ANNUAL MEETING OF THE BERKSHIRE TUBERCULOSIS ASSOCIATION

Following the annual meeting of the Berkshire Tuberculosis Association held at the Wendell hotel November 17, Dr. John F. O'Brien of the Seaside Sanitarium at Niantic, Conn., spoke about the disease, its treatment and the particular manner in which activities are conducted at the Connecticut institution. His lecture was illustrated with lantern slides which showed various points of interest, activities and achievements of the Seaside Sanitarium. The president of the organization, Dr. P. J. Sullivan of Dalton, was chairman of the session.

Preceding the talk, the members of the association enjoyed dinner in the grill of the hotel. The activities and accomplishments of the past year were discussed after which officers for the ensuing year were chosen. Dr. Sullivan, who has been president for four years, felt that the office should be shared with someone else. Dr. George P. Hunt was elected president; Miss Katherine Burgess of Great Barrington, vice-president; W. H. Pritchard of North Adams, treasurer, and Dr. John J. Boland, secretary. Three new members of the board of directors were elected, Dr. Ayers P. Merrill, Mrs. Thomas H. Blodgett of Great Barrington, Mrs. W. Murray Crane of Dalton. The other members of the board are: Dr. A. J. Bond of Adams, Dr. M. M. Brown of North Adams, Mrs. R. H. Davenport, Dr. L. M. French and Dr. George S. Wickham of Lee.

In opening the lecture session, Dr. Sullivan spoke of the activity of the Berkshire organization and of the excellent response each year in the sale of Red Cross Christmas seals, which provides the revenue for the work done by the Berkshire association.

Dr. O'Brien said that "Massachusetts people do not realize what wonderful work they are doing in curing and preventing tuberculosis." He said that he hoped the good work would continue. Only the doctors realize what the activity of organizations and individuals has meant to check the disease, and to accomplish that end money is necessary. He said that he hears much regarding the splendid work being done in the Berkshires.

A general discussion of tuberculosis followed the lecture.—*The Berkshire Evening Eagle.*

NEW ENGLAND HEART ASSOCIATION

The New England Heart Association met at the Peter Bent Brigham Hospital on Nov. 17, 1927, at 8:00 P. M. Three papers were presented.

Dr. George W. Holmes of the Massachusetts General Hospital spoke on "X-ray Evidence of Heart Disease." The first steps in the examination of the heart by X-ray were the normal measurements. Following this the X-ray was used to check the findings by percussion, to study the presence or absence of fluid in the pericardium, and to note the conditions of the great vessels, particularly the aorta.

Dr. Holmes emphasized the following points in technique. Seven feet was taken as the focal distance because here the rays are almost parallel as they reach the object and the image is not distorted. The position of the patient is important. It is necessary to consider the phase of respiration, the heart shadow being increased at expiration and de-

creased at inspiration. In the case of a pericardial accumulation of fluid, the angles of the heart are rounded and the line of demarcation between the auricles and ventricles is no longer present.

Dr. James M. Faulkner of the Massachusetts General Hospital presented a paper on "Orthodiagraphy in Heart Disease." In the use of orthodiagraphy the tube instead of seven feet is put close to the heart, but only the central rays are used for one side at a time. The finished plate gives an accurate picture. The advantages of orthodiagraphy as against tele-roentgenography are first, the absolute accurate results when the procedure is properly carried out; second, the elimination of expensive films; third, the simplicity of the technique, making it possible for the practicing physician.

Dr. Ross Golden of the Presbyterian Hospital in New York City gave the final paper of the evening on "Roentgen Therapy of Rheumatic Heart Disease." He pointed out that X-rays have been used widely in therapeutics. It has been tried in tuberculous adenitis, carbuncles and erysipelas with some success, this being attributed to a local increase in resistance, though the reason for this is obscure. X-rays also act on scar tissue, reducing it greatly in size.

Thirty-one patients have been and are now being treated by X-rays for rheumatic heart. The patients were unselected and their histories extend back two and a half years. The dose given was small, the tube 50 centimeters away and plates on the chest and back just large enough to cover the heart. The results varied but generally the following was the case:

- (1) The T wave was inverted
- (2) The P wave was notched
- (3) The Q. R. S. was variable
- (4) The auricular-ventricular conduction time was lessened
- (5) There was a right ventricular preponderance of short duration
- (6) There was a transitory irregularity in the rhythm.

Four patients were treated for bacterial endocarditis with no effect.

Dr. Golden stated that the value of roentgen ray therapy cannot be determined now due to the lack in number of patients treated and the short time of observation. However, there was no evidence of a deleterious action except a condition called roentgenism, which is due to an overdose. On the other hand twenty of the thirty-one cases showed improvement as evidence by a lowered leucocytosis, lowered fever, and a gain in weight.

Dr. Connor then showed the heart of a case which had just been autopsied. The patient was a girl of sixteen who five years before had had her mitral valve, which was stenosed, slit by Dr. Elliott Cutler in the first operation of this kind done on man. The patient had a history mainly of hemoptysis and dyspnoea and after the operation seemed to improve. She had several recurrent attacks, but lived for nearly five years. At autopsy the heart was enormously hypertrophied, the right auricle alone containing eleven hundred cc of blood. The pericardial sac was obliterated by adhesions. The operation had been successful as far as cutting the mitral valve because a definite scar was seen. Whether or not the operation caused the longer life of the patient, it certainly marks an epoch in surgery of the heart.

The meeting was unusually interesting and Dr. Robey who presided characterized it as "the best one for a long time."

PHYSIOLOGICAL CONFERENCE

A meeting of the Physiological Conference was held on Wednesday, Nov. 16, 1927, at 4:00 P. M., in the Bowditch library. Dr. Joseph C. Aub of the

Massachusetts General Hospital spoke on "Studies in Calcium Metabolism."

In a study of Calcium metabolism under treatment with thyroxin and in abnormal thyroid cases it is shown that the amount of calcium excreted is changed. In cases of thyroid deficiency the feeding of thyroxin causes an increase of calcium in the urine and feces. Myxedema causes a decrease in Ca excretion while with adenoma of the thyroid the Ca excretion is increased, which level falls on removal of the mass. The same phenomena occur in normal people. In the treatment of a case of pronounced tetany parathormone increased the blood Ca, while thyroxin caused the increased Ca to be excreted.

The effects of parathormone are similar to thyroxin except that it affects the blood level more so. The first effect of parathormone is a marked rise of blood Ca and also urine Ca, with an increase of PO₄ in urine. This suggests that PO₄ are affected primarily and Ca metabolism secondarily. After parathormone dosage is stopped, there is a retention of base with a marked phosphate excretion. The total Ca excretion is only increased to neutralize the excessive acid production of the abnormal metabolism.

One must conclude from these results that thyroxin and parathormone affect mainly the calcium and phosphates in the body, other inorganic salts being unaffected except by the tremendous protein excretion.

Since parathormone acts on Ca excretion, it was thought that it might have some effect in lead poisoning. On the first dose some lead was excreted with much Ca. Calcium was given to make good the loss and on the second dose there was no more lead in the urine. Even with the NH₄Cl treatment the lead didn't move.

A study of the effects on bone was made. Animals were fed on a low Ca diet for three months and a leg amputated. They were then put on a high Ca diet for three months and then sacrificed. A similar treatment but reversed was also carried through. The following results were obtained.

In the case of the low Ca diet few spicules of bone were found in the epiphyses with the shafts unaffected. Under a high Ca diet both the shaft and epiphyses got more spicules. It was also shown that bones have a supply of spicules at birth these disappear in aging of the bone, as if the Ca comes from the spicules to form the shaft. The action of parathormone is to pull these spicules from the bones. These results were proven by staining with Alizarin Red which only stained new spicules of bone.

From this we may conclude that the deposit of Ca after a low Ca diet is all put into spicules, and that the storehouse of Ca is in the spicules and not in the shafts of the bones.

THE HARVARD MEDICAL SOCIETY MEETING

The Harvard Medical Society met in the Peter Bent Brigham Hospital amphitheatre on November 22, 1927, at 8:15 o'clock. After a presentation of cases, Dr. Cecil K. Drinker spoke on "Oedema in the light of recent experiments upon the capillaries."

The first case was presented by Dr. Schmitz. The patient had hypertension with chronic myocarditis and auricular fibrillation. On admission she was cyanotic, dyspnoeic, with a marked pitting edema of the lower extremities and over the sacrum, riles at the bases of both lungs, and a palpable, tender liver. On a Karrel diet and with digitalis no improvement of the edema was noticed and it became more marked in the right leg. After six days of ammonium chloride she was given ½ c.c. of novarsurol and the next day 1 c.c. of novarsurol. Diuresis of 2½ litres followed, which was repeated after each subsequent treatment with novarsurol. The edema diminished markedly. The case was interesting in view of the subject of the evening's paper and because of the two types of edema

that seemed to be present, one generalized resulting from cardiac failure and the other a localized type due to venous thrombus. Dr. Christian remarked that novarsurol is not effective as a rule unless it is preceded by ammonium chloride.

The second case was presented by Dr. Harvey Cushing. The patient was a man 37 years old who gave a history of tuberculous pleurisy and various attacks of unascertained origin. Attacks with impairment of speech, numbness in the right arm, pain on the left side of the head, and optic disturbances became more frequent and he came into the hospital. A tuberculoma was suspected, but X-ray plates showed healed tuberculous. The vascularity over the top of the skull was greatly increased, with marked pulsating; the carotids gave a machinery murmur and the external jugular vein was enormous. A bone flap was turned down and an angioma in his left angular gyrus was encountered. Decompression was done followed by radiation.

The patient was discharged; the attacks continued even after a series of six deep radiations. Dr. Cushing described the lesion as probably congenital. It consisted of a mass of arterioles from which the arterial blood passed directly into 2 or 3 large veins, the spurt of arterial blood passing into the thin-walled dilated veins being easily seen.

Dr. Cushing then described three other similar cases and illustrated by slides.

Dr. Drinker confined his talk to a laboratory or theoretical discussion rather than an exposition of clinical aspects. His work was done in association with Dr. Churchill in the laboratories of Dr. Krogh at Copenhagen.

Dr. Drinker pointed out that the foundation for the general physiology of fluid exchange was laid by Starling, who measured the osmotic pressure of the colloids of blood serum and found it to be 20-30 mm. of H₂O. It is this osmotic force which allows fluids to enter and leave the capillaries.

If the capillary walls were reasonably uniform, much confusion would be avoided. This nonconformity is of several sorts. First, there is a structural difference. In places this can be seen grossly and in others only by the microscope. Experiments have also shown that equally striking but invisible differences also exist. Secondly, dilatation causes changes. There is always a constant small leakage, but excessive extravasation of fluid only takes place when the capillary walls are fully dilated. Thirdly, there are variations in the capillary blood pressure, as shown by holding the hand higher or lower than the heart and measuring the blood pressure. The pressure in constricted capillaries is less than in dilated ones, as would be expected, due to the fact that dilatation is usually accompanied by increased blood pressure and flow. Fourthly, the nerves which make the fine adjustments vary. Fifthly, there are changes in the tissues which influence the fluid exchange. Sir Thomas Lewis theorizes that there is in the skin a histamine-like substance which is liberated when cells are damaged and the explosive force of liberation causes edema. The material is then washed away by the increased blood flow. Krogh maintains that there is a hormone which inhibits dilatation and maintains capillary tone. The most stable factor in affecting the fluid exchange is the osmotic pressure of the blood proteins and this varies greatly between the capillaries and the lymph stream, a change of fluid between blood and lymph and back again taking place many times in 24 hours.

The efforts of Dr. Drinker and Dr. Churchill were directed toward finding the cause of the apparent edema produced by the extract of the posterior lobe of the hypophysis. The web of the frog's foot was employed for this demonstration. The capillaries were perfused with colloidal graphite, which does not cause embolism. The experiments, which are not completed, show two conclusions thus far. First, no addition of any simple substance like pituitrin re-

strains edema, and second, there is some substance in serum which either causes edema or by its neutralization allows edema. The future attempts of the experiments will be to find some substance in the serum which will prevent edema. This will be of clinical value.

Dr. W. B. Cannon presided at the meeting, which was well attended.

HARVARD MEDICAL SOCIETY

The next regular meeting of the Harvard Medical Society will be held as usual in the amphitheatre of the Peter Bent Brigham Hospital, Tuesday evening, December 13th, at 8:15 P. M. The program follows:

1. Presentation of cases.
2. Neural organization for emotional expression and some inferences therefrom. Dr. Walter B. Cannon.

NEW ENGLAND ASSOCIATION FOR PHYSICAL THERAPEUTICS

A regular meeting of the New England Association for Physical Therapeutics will be held at the Boston Square and Compass Club, 448 Beacon St., December 21, at 8 o'clock.

BUSINESS

- Nomination of officers for ensuing year.
- Report of Committee for the year and especially the Convention.

SCIENTIFIC SESSION

Electrical and Electro-magnetic waves with Radium X-ray, Ultra Violet, Solar Spectrum, and Infra-Red and High Frequencies by J. Emory Clapp, Boston.

Dinner at 6 P. M.

Full attendance is important.

BOSTON ORTHOPEDIC CLUB

There will be a meeting of the Boston Orthopedic Club in the Sprague Hall of the Boston Medical Library on Monday evening, December 12th, at 8:15 P. M.

PROGRAM

"Fractures of the Odontoid Process. Report of a Personal Case." By Dr. Robert B. Osgood and Dr. Charles C. Lund.

"Posterior Capsuloplasty in Certain Flexion Contractures of the Knee." By Dr. Philip D. Wilson.

R. K. GHORMLEY, *Secretary*.

NEW ENGLAND PEDIATRIC SOCIETY

The Annual Meeting of the New England Pediatric Society will be held at the Boston Medical Library on Friday, December 23, 1927, at 8:15 P. M.

1. The Report of the Council.
2. The Report of the Treasurer.
3. The following paper will be read "Some Experiences with Tracheotomy," by Lyman Richards, M.D., Boston, Mass.
4. Election of Officers.

Light refreshments will be served after the meeting.

J. HERBERT YOUNG, M.D., *President*.
THOMAS H. LANMAN, M.D., *Secretary*.

NEIGHBORHOOD MEDICAL CLUB

The next regular monthly meeting of the Neighborhood Medical Club will be held on Tuesday, December 13, 1927, at 8:15 P. M., at the Headquarters of the Boston Tuberculosis Association, 554 Columbus Avenue.

Subject: "Cancer."

Speaker: Channing C. Simmons, M.D.
Lantern Slides.

All physicians are invited.

WINTER TRAINING COURSE FOR OFFICERS, MEDICAL SECTION

The December meeting of the Winter Training Course for Officers Medical Section, Organized Reserves, U. S. Army, in Boston and vicinity will be held on the 14th at the University Club, 40 Trinity Place, Boston, Mass.

The meeting will begin promptly at 8:00 P. M. The room number will be on the Announcement Board at entrance on first floor. Officers attending the meeting will be given credit for participation in military activities.

MASSACHUSETTS PSYCHIATRIC SOCIETY

The next regular meeting of the Massachusetts Psychiatric Society will be held at the Boston Psychopathic Hospital, 74 Fenwood Road, on Friday, December 9, 1927, at 8 P. M.

The speaker of the evening will be Dr. Adolf Meyer of Baltimore, Professor of Psychiatry at Johns Hopkins University and President of the American Psychiatric Association. The subject of his address will be "Genetic-dynamic versus Nosologic Teaching in Psychiatry."

SYMPOSIUM ON SYPHILIS AT THE BOSTON DISPENSARY, 25 BENNET STREET

All members of the medical profession are cordially invited to attend a Symposium on Syphilis to be conducted by the Committee on Research of the Boston Dispensary, at 25 Bennet Street, on Thursday, December 15th, at 8 o'clock, P. M.

The following papers will be read:

1. "The Ophthalmoscope as an Aid in the Treatment of Syphilis." Joseph J. Skirball, M.D. Discussion: W. D. Rowland, M.D.

2. "The Morphology of Blood Syphilis." William Dameshek, M.D. Discussion: Ralph C. Larabee, M.D.

3. "The Glycerol Cholesterol Precipitation Reaction." (a) "A Comparison of Its Results with those of the Wassermann, Kahn and Slide Tests in Sixteen Hundred Cases." Russell L. Splaine, M.D., Austin W. Cheever, M.D.

(b) "As a Diagnostic Criterion of Syphilis." Austin W. Cheever, M.D., Russell L. Splaine, M.D.

(c) "As a Means of Indicating the Necessity of Continued Treatment." Austin W. Cheever, M.D., Oscar J. Raeder, M.D., Russell L. Splaine, M.D.

(d) "In the Diagnosis of Neurosyphilis." William A. Hinton, M.D., Oscar J. Raeder, M.D.
Discussion: George M. Lawson, M.D., C. Morton Smith, M.D., Harry C. Solomon, M.D., Henry D. Lloyd, M.D.

MAYNARD LADD, M.D., *President*.
BENJAMIN E. WOOD, M.D., *Secretary*.

SOCIETY MEETINGS

- December 9—Massachusetts Psychiatric Society.
 - December 12—Boston Orthopedic Club.
 - December 13—Harvard Medical Society.
 - December 13—Neighborhood Medical Club.
 - December 14—Winter Training Course for Officers, Medical Section.
 - December 15—Boston Dispensary.
 - December 21—New England Association for Physical Therapeutics.
 - December 23—New England Pediatric Society.
- Detailed notices of the above meetings appear elsewhere on this page.

January, February, March and April, 1928—Last Saturday at 11 A. M. Cheever Amphitheatre, Staff Clinical Meetings at Boston City Hospital.

DISTRICT MEDICAL SOCIETIES

Essex North District Medical Society

January 4, 1928 (Wednesday)—Semi-annual meeting at the Centre Church vestries, Main Street, Haverhill, at 12:30 P. M.

May 2, 1928 (Wednesday)—Annual meeting at 12:30 P. M.

May 3, 1928 (Thursday)—Censors meet for examination of candidates at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M. Candidates should apply to the Secretary, J. Forrest Burnham, M.D., 567 Haverhill Street, Lawrence, at least one week prior.

Essex South District Medical Society

January 4, 1928 (Wednesday)—Deer Cove Inn, Swampscott. Dinner at 7 P. M.

Dr. Frank Lahey, "Differential Points of Importance to the General Practitioner in Surgical Diagnosis." Discussion by Drs. Walter Philpen of Salem and N. P. Breed of Lynn, 10 minutes each, and from the floor.

February 1 (Wednesday)—Council meeting, Boston.

February 8 (Wednesday)—Danvers State Hospital. Clinic at 4 P. M. Buffet supper at 6 P. M., followed by

Dr. Abraham Myerson, "Some Aspects of Mental Hygiene."

Discussion by Drs. W. F. Wood of Hathorne and G. M. Kline of Beverly, 10 minutes each, and from the floor.

March 7 (Wednesday)—Lynn Hospital. Clinic at 5 P. M. Dinner at 7 P. M.

Dr. Henry R. Viets, "The Acute Infections of the Nervous System," with lantern slides and moving pictures.

Discussion by Drs. W. V. McDermott of Salem and J. W. Trask of Lynn, 10 minutes each, and from the floor.

April 11 (Wednesday)—Essex Sanatorium, Middleton. Clinic at 5 P. M. Dinner at 7 P. M.

Dr. Raymond S. Titus, "Obstetrical Emergencies."

Discussion by Drs. J. J. Egan of Gloucester and A. T. Hawes of Lynn, 10 minutes each, and from the floor.

May 3 (Thursday)—Censors meet at Salem Hospital for the examination of candidates at 3:30 P. M. Candidates should apply to the Secretary, Dr. R. E. Stone, Beverly, at least one week prior.

May 8 (Tuesday)—Annual meeting. Place and speaker to be announced.

Suffolk District Medical Society

Combined meetings of the Suffolk District Medical Society and the Boston Medical Library will be held at the Boston Medical Library, 8 The Fenway, at 8:15 P. M., as follows:

December 28—Medical Section. "Functions and Organization of the Boston City Hospital."

January 25, 1928—General meeting in association with the Boston Medical Library.

Dr. George W. Crile, Lakeside Clinic, Cleveland, Ohio. Title to be announced later.

February 29—Surgical Section. Subject to be announced later.

March 28—Medical Section. "The Use and Misuse of Vaccines." Dr. Hans Zinsser, Dr. Francis M. Rackemann, Dr. Charles H. Lawrence.

April 25—Annual meeting. Election of officers. Paper of the evening to be announced later.

The medical profession is cordially invited to attend these meetings.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.

BOOK REVIEWS

Epidemic Encephalitis (Encephalo-Myelitis).

By LEO M. CRAFTS, B.L., M.D. The Gorham Press, Boston, 1927. 237 pages, illustrations.

The interest in encephalitis lethargica has not abated in spite of the fact that the acute epidemic phase of the disease apparently has passed, at least for the time being. Cases are

being reported from all over the country at present, indicating that the late manifestations of the disease are very wide-spread. The book under consideration is a report of that character, containing notes on over fifty cases seen by the author. It is illustrated by charts and photographs and occasionally by reproductions of microscopic pathological sections of the brain. The first half of the book deals with a general consideration of the symptoms and diagnosis.

The book cannot be highly recommended. It is poorly arranged, poorly printed, and the illustrations are rather unsatisfactory. The author apparently has a good understanding of the disease, epidemic encephalitis, but he has very crude ideas in regard to the presentation of his subject. One cannot congratulate the publishers, either, on their book-making.

"*Researches in Polynesia and Melanesia.*" An Account of Investigations in Samoa, Tonga, the Ellice Group, and the New Hebrides, in 1924, 1925. Parts I-IV by PATRICK A. Buxton, M.R.C.S., D.T.M., & H. assisted by G. H. E. HOPKINS, M.A., F.E.S. Published by the London School of Hygiene and Tropical Medicine. London, W.C.1, July, 1927.

This beautiful volume represents only a part of the important work recently performed by its authors. Further publication is expected. The work was instigated by the London School of Tropical Medicine and performed in coöperation with the New Zealand Government.

Part I of the report gives a narrative of the expedition and describes the geography, the flora and the fauna of Samoa. Part II deals with the climate of Samoa; Part III with medical entomology, and Part IV with experiments on *Aedes variegatus* and *Aedes argenteus*. Four appendices discuss respectively climate in Samoa, malaria and filariasis in the New Hebrides, possible influences affecting the hatching of eggs of *A. variegatus*; and hatching times of eggs of *A. variegatus*.

The work is essentially of an entomological character but much of it was designed to throw light upon problems of mosquito control. It should, therefore, be of interest not only to entomologists but also to persons interested in the conservation of health in the tropics.

Appendix II points to the lack of any satisfactory measure of the filariasis existing in a community and proposes four criteria, namely: blood examination, search for enlargement of the epitrochlear glands, hydroceles and elephantiasis.

The relative scarcity of elephantiasis among whites living in Melanesia generally is contrasted with its relative prevalence in Polynesia and Fiji, and this difference is attributed to the fact that in the former region filariasis is nocturnal and is transmitted only by a night-flying

mosquito, whereas that of Polynesia and Fiji is not periodic and can be transmitted in the daytime.

A fine series of illustrations depict breeding places of mosquitoes.

The Ship Sails On. By NORDAHL GRIEG. Translated by A. C. Chater. Published by Alf. A. Knopf.

A novel of the sea, depicting in a highly realistic way the intimate side of a sailor's life. The reason for mentioning it among the book reviews in a medical journal is that much of the story concerns the sexual conduct of the men and the dire results of their adventures. From the point of view of preventive medicine, the book is suggestive, for it portrays the loneliness of sailors when they have shore leave in a strange port, and the temptations that beset them. It is a strong book, well written, tinged with the gloomy mysticism so often found in Scandinavian fiction.

Surgery: Its Principles and Practice. For students and practitioners. By ASTLEY PASTON COOPER ASHURST, A.B.; M.D.; F.A.C.S. Prof. Clinical Surg. Univ. of Penn., Surgeon to Episcopal Hospital and to the Phil. Orthopaedic Hosp. and Infirmary for Nervous Diseases; Colonel, Med. Resv. Corps, U. S. Army. Third Edition. Thoroughly revised, with 15 colored plates and 1046 illustrations in the text, mostly original. Lea & Febiger. Philadelphia, 1927. Dedicated to the memory of Richard H. Harte, a surgeon of wide clinical experience, an able teacher, a wise consultant, a safe and skilful operator, this volume is gratefully dedicated by his pupil, assistant and friend the author.

From the preface to the first edition, 1914: "It is the function of a work such as this to furnish the foundation on which a knowledge of surgery is to be built. Didactic and clinical lectures, papers in current journals, classical monographs, and particularly the student's clinical work and the surgeon's daily practice are valuable adjuncts, but unless the foundation has been laid broad and deep, no useful superstructure can be erected. Every text-book, however, has its limitations. At best, it can but teach the student to know; it cannot teach him to do."

From the preface of the third edition, 1927: "In conclusion, it is a grateful duty to express to the publishers and the printer sincere thanks for their never failing aid in the revision; and to the surgeons and students of surgery of America high appreciation for the continuance of the cordial reception which has always greeted the book wherever it is known."

The quotations above from the two prefaces amply suggest the reasons why Ashurst's Surgery has always received a cordial reception: it is because the author himself deserves the

beautiful words which he has offered to Dr. Harte; and because (in the opinion of the reviewers) the book is the best single volume in the world, upon the subject of surgery, for the American student. Not the least of its charm (and value) lies in the author's obvious respect for the English language,—and for his scrupulous regard for the rules of grammar and punctuation. One cannot often say this in regard to medical textbooks.

Thirteen years ago the writer had the privilege of reviewing the first edition of this textbook. That review was brief but favorable; this review will be even briefer, and also more favorable: for the passage of time and the test of practical use, (the only real test) has demonstrated the high value of Ashurst's work; and each succeeding edition shows that very careful revision, ruthless elimination of matter or illustrations either inadequate, superfluous or antiquated, and that quiet authority, unerring decision and clarity of statement which characterizes the true teacher: real teachers are rare as every student knows: and a better teacher of surgery than Astley Paston Cooper Ashurst does not exist. He does credit to his name, and his book does credit to its author, and to his namesake.

The book is unhesitatingly recommended, and without reservation, to students, practitioners, and to other teachers.

We had almost forgotten to mention one extraordinary thing about this third edition: it contains actually fewer pages (almost a hundred) than its predecessor—yet the number of cuts and illustrations is increased, and now almost every picture is original. The volume contains a little more than 1100 pages, as many illustrations, and an adequate index. Paper, letterpress, and binding are all almost as good as the text.

The writer hopes to have the privilege of commenting upon successive future additions, for a series of years which (as De Maupessant?) says, in relation to quite a different subject—"becomes a matter of higher mathematics."

Immunity in Syphilis. By ALAN CHESNEY, M.D., Johns Hopkins Medical School. Baltimore: Williams & Wilkins. 85 pages. Price, \$2.50.

This is one of the "Medicine Monographs" which originally appeared in *Medicine*, a quarterly periodical edited by David L. Edsall, Harvard Medical School. It is a comprehensive review of the present knowledge of immunity in syphilis, presented in a form adapted to the needs of the teacher, the clinician, and the laboratory worker. Dr. Chesney has done an extremely difficult thing in giving in relatively few words the important contributions on the subject. He has summarized experimental work done on the monkey, and rabbit, as well as phenomena observed in man. While he has covered much the same field as does Kolmer's

Chemotherapy, he has handled his material in such a widely different way that he does not trespass, and the monograph makes an excellent companion volume to Dr. Kolmer's detailed work. The bibliography is extensive and chosen with scholarly discrimination.

The Science and Practice of Surgery. By W. H. C. ROMANIS and PHILIP H. MITCHNER. In two volumes. Price, \$12.00. Pp. 1750, with 666 illustrations. New York: William Wood & Company, 1927.

This new text-book of surgery comes from St. Thomas's Hospital in London. In their own words, the authors have endeavored as far as possible to give an account of the surgical pathology as well as the practical details of diagnosis and treatment. The chapters on regional surgery are prefaced by a small type description of the surgical anatomy of the part.

The material is presented in an unusually interesting manner, and the style in no way suffers or becomes pedantic as so often happens when the anatomy, diagnosis and treatment of surgical disorders are condensed into two small volumes. The terminology is colored by a free use of eponyms, and the illustrations are drawn from what has apparently been an extensive clinical experience of the authors. The clinical teaching seems extraordinary sound and is given in a forceful manner. In a discussion on intestinal obstruction we find the italicized warning that "It cannot be too strongly insisted upon that the so-called 'fecal vomiting' is a symptom not of obstruction but of impending death."

The work is an excellent one to place in the hands of medical students, and goes a long way toward satisfying their constant demand for a "readable" yet condensed text-book.

The International Medical Annual, 1927. William Wood & Company.

This volume is, like its predecessors, a careful and satisfactory review of the important literature of the preceding several years. Its chief value lies in the fact that it covers the ground in a rather complete and satisfactory way, each subject being self-inclusive, and referring not only to the work of the immediate preceding months, but combining with this review some of the important work of the past. The physician may, therefore, get a condensed and rather complete picture of the subject discussed. In this respect the articles are more satisfactory than those usually found in reviews of recent literature. The work covers medicine, surgery, neurology and the other more important specialties. It is recommended to those who wish to keep in touch with the latest and more important advances. Full references are given.

BOOKS RECEIVED FOR REVIEW

A Textbook of Pathology. By Francis Delafeld and T. Mitchell Prudden. New York: William Wood & Co. 1339 pages. Price, \$10.

American Medicine and the People's Health. By Harry H. Moore. New York: D. Appleton. 647 pages. Price, \$5.

Keeping the Baby Well. By John Howell West. New York: The Knickerbocker Press. 233 pages. Price, \$2.00.

Urography. By William F. Braasch. Philadelphia: W. B. Saunders Company. 480 pages. Price, \$13.00.

Appendicitis. By Hubert Ashley Royster. New York: D. Appleton & Co. 370 pages.

Diseases of the Skin. By Robert W. MacKenna. Baltimore: Williams & Wilkins Company. 452 pages. Price, \$7.50.

The Rise and Fall of Disease in Illinois. By Isaac Rawlings. State Department of Health. 432 pages.

Modern Aspects of the Diagnosis, Classification and Treatment of Tuberculosis. By J. Arthur Myers. Baltimore: Williams & Wilkins. 271 pages. Price, \$5.50.

Tonic Hardening of the Colon. By T. Stacey Wilson. New York: Oxford University Press. 210 pages.

The Rockefeller Foundation Annual Report—1926. New York: Rockefeller Foundation. 466 pages.

An Introductory Course in Ophthalmic Optics. By A. Cowan. Philadelphia: F. A. Davis Company. 262 pages. Price, \$3.50.

Ophthalmoscopy, Retinoscopy and Refraction. By W. A. Fisher. Philadelphia: F. A. Davis. 291 pages. Price, \$3.75.

The Principles of Sanitation. By C. H. Kibbey. Philadelphia: F. A. Davis. 354 pages. Price, \$3.50.

Lectures on the Biologic Aspects of Colloid and Physiologic Chemistry. Philadelphia: W. B. Saunders Company. 244 pages. Price, \$2.50.

Lehrbuch der Operative Geburtshilfe. By Georg Winter. Berlin: Urban & Schwarzenberg.

London School of Hygiene and Tropical Medicine Collected Addresses and Laboratory Studies. Vol. III. 23 Endsleigh Gardens, Euston Road, London, W. C. 1, England.

The Queen Charlotte's Practice of Obstetrics. By Various Authors. New York: William Wood & Co. 629 pages. Price, \$7.00.

Food and the Principles of Dietetics. By Robert Hutchinson. New York: William Wood & Co. 610 pages. Price, \$5.00.

Demonstrations of Physical Signs of Clinical Surgery. By Hamilton Bailey. New York: William Wood & Co. 217 pages. Price, \$6.50.

Radium in Gynecology. By John G. Clark and Charles C. Norris. Philadelphia: J. B. Lippincott Company. 315 pages.

Actinotherapy for General Practitioners. By H. G. Falkner. New York: William Wood & Co. 152 pages. Price, \$3.00.

Tobacco and Physical Efficiency. By Pierre Schrupf-Pierron. New York: Paul B. Hoeber. 134 pages. Price, \$1.85.

The Normal Diet. By W. D. Sansum. St. Louis: C. V. Mosby Company. 136 pages. Price, \$1.50.

Diseases of the Skin. By Henry H. Hazen. St. Louis: C. V. Mosby Company. 572 pages. Price, \$10.00.

Nasal Neurology Headaches and Eye Disorders. By Greenfield Sluder. St. Louis: C. V. Mosby Company. 428 pages. Price, \$11.50.

Diseases of the Mouth. By Sterling V. Mead. St. Louis: C. V. Mosby Company. 578 pages. Price, \$10.00.

Nutrition and Diet in Health and Disease. By James S. McLester. Philadelphia: W. B. Saunders Company. 783 pages.

Nerve Tracts of the Brain and Cord. By William Kellier. New York: Macmillan Company. 456 pages. Price, \$8.00.